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THE

DUBLIN JOURNAL

OF

MEDICAL SCIENCE.

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THE DUBLIN JOURNAL

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MEDICAL SCIENCE.

JULY 1, 1911.

PART I.

ORIGINAL COMMUNICATIONS.

ART. I.—*The National Insurance Bill.*[a] By J. B. STORY, M.B., F.R.C.S.I.; President of the Leinster Branch of the British Medical Association.

THE subject of the President's Address this year is the National Insurance Bill now under discussion in the House of Commons.

It is a subject in which we all must take a keen interest, as tax payers, as employers of labour, as workers, and not least of all as doctors.

Meetings of branches of our Association and of medical men all over the country have testified to the interest taken by the profession in the proposed arrangements for medical benefit laid down in the Bill. A meeting of my own College took place only yesterday to discuss the subject—a meeting not of the College strictly so-called, but of all Licentiates as well as of Fellows. The report of the meeting has not yet been published, but I can state that the meeting was unanimous in its condemnation of

[a] Address delivered to the Leinster Branch of the British Medical Association, June 9th, 1911.

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the features in the Bill, which have already been condemned by the branches of our Association in England.

There is no one who does not approve of the general objects of the Bill; no one who would not rejoice if all the workers in this country were insured against the evils of sickness and also of unemployment. But whether the means which are proposed in the Bill to effect this object will be efficient, or whether, if efficient, the cost of the scheme will not be greater than the benefits which it confers upon the community, are matters upon which there are, and will be, strong differences of opinion.

I may mention a few points worth notice in this connection.

Generally speaking, the effect of this Bill upon wages cannot be favourable. It puts a tax upon production which must affect all industrial concerns, and many employers of labour will find themselves in the position of being obliged either to lower their wages, or to reduce their staff, or to raise their prices.

The effect of any one of these courses, it is clear, will be unfavourable to labour—either there will be less money in the wages fund, or fewer labourers to receive it, or the price of commodities to be purchased by the labourer will be raised.

This loss must be taken into account in calculating the advantages of the Bill.

The economical soundness of the scheme is, however, a subject upon which it would be ludicrous for me to express any opinion, but I may venture to make a few more or less general criticisms which occur to me, such as that the scheme is obviously insufficient, as a large class of workers will not be included in it.

The small worker for no master, the casual worker, the migratory worker, will all—male and female—be outside a system whose essence is regular payment, regularly supplemented by employers' contributions.

Now, this is just the class which most needs the benefits offered to workers by the Bill.

Then there is very great injustice in some of the arrangements. The healthy and efficient will go on paying their contributions, without receiving any benefits, while the weakly and inefficient will draw the proceeds.

This injustice is peculiarly displayed in the case of women. The unmarried woman worker has to contribute, and can claim benefits so long as she remains an employed worker under the Act, but no longer.

When she marries, all her contributions, as well as those extracted from her employer, are impounded by the State, except in the event of her continuing to be an employed labourer under the Act, and this event will almost never occur.

Another injustice which specially affects women has been pointed out in the *Irish Times* of June 8th, as regards domestic servants.

The domestic servant and her employer have to contribute weekly a sum which practically corresponds to a tax of from 6d. to 8d. in the £, but the Bill expressly states that no insured person shall be entitled to sickness benefit or disablement benefit during any period when he is provided with board and lodging by his employer—in other words, a maid servant will get no sickness benefit unless her employer turns her out of the house.

Another point is that, as is obvious to Irishmen, the Bill has been drawn purely with regard to the industrial conditions obtaining in Great Britain, without any attention whatever to the peculiar circumstances of Ireland.

It is a Bill drafted for a manufacturing community, and it is very possible—nay, very probable—that it will have not a beneficial but an injurious effect upon the prosperity of an agricultural country like ours.

Such points as these, which I have briefly alluded to, are of very great interest to every thoughtful member of the community, but are not of special interest to medical men as such.

What interests us here as medical men is the effect of the Bill upon the efficiency of medical work in the com-

munity, upon the status of the medical man, and the sufficiency of the remuneration which he is to receive for whatever increased work is put upon him.

This subject naturally divides itself into two aspects :—

(1) The effect upon the Medical Profession and its work in Great Britain, and—

(2) The effect in Ireland.

As a branch of the British Medical Association we here take a keen interest in whatever affects the Medical Profession in England, and if we were not—as members of the Association—bound to take an interest in this matter, we know that anything which affects the Medical Profession in England, either for good or for evil, is sure to react sooner or later upon the Medical Profession in Ireland.

Now, in Great Britain it appears certain that the Medical Profession will be injuriously affected by the National Insurance Bill in its present shape.

The Bill adopts the objectionable principle of the capitation fee in the contract proposed to be made with members of our profession—a method of practice which appears to be, at present, a necessary evil in many districts of Great Britain, but one which is essentially opposed to the best interests of our profession and to the interests of the sick, for it is certain to diminish the thoroughness and efficiency of medical work.

It is contrary to the essential principle of all insurance systems—viz., that the risk or loss of the individual is to be borne by the community.

In the capitation fee system of contract practice this principle is reversed—the loss of the individual, as represented by sickness, has to be borne, not by the community, but by the doctor individually; in fact, each doctor under this system forms himself into an insurance company with unlimited liability. His action differs not at all from that of a speculator on the Stock Exchange.

It is essentially a gambling transaction, there may happen to be less sickness than he anticipates, and he

profits, but there may happen to be more sickness than anticipated, and he loses.

It may be a fact that it would be impracticable to work a vast scheme such as the National Insurance Bill on any other principle than that of a capitation fee, but nevertheless the principle is a thoroughly bad one when introduced into medical practice.

In addition to the nationalisation of the capitation fee principle in medical practice, the Government acts with great unfairness to the medical profession by actually imposing upon the doctor risks which it refuses to accept itself.

The ordinary rule of contract practice under the capitation fee principle is that a member is not entitled to medical attendance for illness brought about by drink or vice.

The Government protects itself in the Bill by depriving such persons of sick pay, but, nevertheless, enacts that they are to have medical attendance free of charge.

Further, all bad lives, such as those rejected by friendly societies, are to come in under the Post Office Scheme, but on increased premiums or diminished benefits.

The doctors, therefore, have to attend these bad lives on the same capitation fee as the rest, while the State protects its interests by increased premiums or diminished benefits.

Mr. Lloyd George is generally understood to offer a capitation fee of considerably less than 6s. to the doctors for medical attendance on workers, amongst whom there will be insured many thoroughly bad lives, while at the present time the State pays 8s. 6d. a year as capitation fee for medical attendance on its Postal employees, who are good lives, selected after medical examination.

In Ireland the payment actually made by Government on account of the high-class lives of the Royal Irish Constabulary is £1 4s. per annum. Medicine has to be supplied, and treatment of the families is included; but even allowing for this, the rate is obviously enor-

mously higher than the Government is proposing to pay for medical treatment of unselected lives of the whole working population, including Irish workmen, and we all know that in the case of both the Post Office and the Constabulary extra medical benefits are required, consultations, operations, admission to hospitals.

Is it not a flagrant injustice that in cases where the payment of sickness or disablement benefit is suspended on the ground that the disease or disablement has been caused by misconduct on the part of the person claiming the benefit, such person shall, nevertheless, be entitled to free medical attendance?

The unjust treatment of our profession in the Bill is accentuated by the arrangements made for the administration of medical benefits, which is entrusted either to friendly societies or to Local Health Committees.

Now, there is one point upon which the whole Medical Profession in Great Britain is agreed, and that is that it will refuse to be placed in this respect under the control of Friendly Societies. We in Ireland are equally agreed upon this point.

As regards the Local Health Committees the arrangement is equally objectionable. The only protection offered to the Medical Profession as such is in Clause 5, Section 43, where it is stated :—" The remaining members of the Committee, not exceeding in number one-fourth of the members appointed in manner aforesaid, shall be appointed by the Insurance Commissioners, but so that at least two of the members so appointed shall be duly qualified medical practitioners."

This clause seems to me obscure, but its effect has been calculated by Dr. John Esmond, M.P. The result is this, that Medicine may obtain representation on the Committee to the amount of one-fifth of the whole Committee in some cases; in other cases only to one-eleventh.

The inadequacy of this representation is obvious when it is pointed out that it is quite possible that all the other

members of the Committee may be actually beneficiaries under the Act.

It is certain that in Great Britain, where there is a large number of medical men doing a working-class practice (frequently a capitation fee contract practice), the result of this National Insurance Scheme will be to very largely diminish the income of many medical men. In Ireland there are but very few medical men engaged in a working-class practice, so that the effects of the Bill upon the remuneration of Irish practitioners may not be so injurious as upon that of doctors in Great Britain. On the contrary, it is possible that the present Poor Law Medical men may obtain some small addition to their exiguous incomes.

The Dispensary Medical Officer at present receives a small salary for gratuitous attendance upon the poor in his district. This, of course, is an instance of the capitation fee type of contract practice, but it differs from the practice as established in England.

The Irish doctor does not expect to support himself by this contract practice—he merely accepts the arrangement as a means of putting himself in a position to obtain a livelihood from private practice in the neighbourhood.

The fact of his possessing the Poor Law appointment enables him, in some cases, to obtain the monopoly of medical practice in the district, and in every case he accepts the position only because it gives him an advantage over his competitors.

Many English medical men, however, assert that they undertake club practice for precisely similar reasons, and that, so far from any profit being made, these club practices are run at a loss.

Under the National Insurance Bill the Irish Dispensary doctor will obtain some additional remuneration for attending the insured labourers in his district, whom he would have had to attend without extra reward in any case, so that the existing Poor Law Officers in Ireland may possibly gain something from the Act; but no one

can fail to see that the medical men who succeed the present occupants of these positions will surely have their salaries reduced by the same amount as the present occupants may have their salaries increased, so that the unfortunate Poor Law Medical Officer in Ireland will, ultimately, be no better off than he is at present. [a]

But the present Poor Law Medical Officer in rural Ireland is bound to lose much more than he can possibly gain.

In most districts the large majority of his paying patients are small farmers or small tradesmen, who pay no income tax, and all these will be lost to him completely by being included in the Post Office Scheme. The result in many cases will be not merely a reduced income, but actual beggary.

There is one very important point about club practice which should be emphasised; it is that practically almost every form of medical or surgical treatment is excluded from the terms of the contract, except that of "advice and a bottle of medicine."

If the State is going to provide the insured with complete medical benefits, including operations and such efficient treatment as is to be obtained in the wards or in the out-patients' departments of our voluntary hospitals, both general and special, it will have to pay for them.

They cannot be procured at club rates, nor at anything like such rates.

To mention only a few obvious matters. Extra payment must be made for consultations, operations, and—in case of rural districts—for mileage. The State in this Bill has no higher aim, it seems to me, than that of providing the worker with "advice and a bottle of medicine."

The effects of the Bill—so far as the Medical Profession is concerned—are not restricted to those of us who are in the Poor Law Service.

[a] Since writing the above it has been pointed out to me that Clause 59 (7) makes it compulsory on every Medical Officer of Health in each dispensary district in Ireland to do the work under the Act, and there is no compulsion on any one to pay him.

Our hospitals and their medical staffs will be affected by the proposed arrangements, and, I believe, very injuriously affected.

At present our hospitals are charitable institutions whose incomes are largely drawn from those who are, directly or indirectly, employers of labour. The subscriber obtains a return for his subscription in the treatment given to his employées in the hospital or by the hospital staff.

The Bill will make a great change. First, the employer will be compelled to pay a tax in order to provide medical treatment for his workers, and then the Local Health Committee will enter into a contract with sundry medical men to do the work which is at present carried out by the hospital.

The employers of labour will themselves no longer get any "value" for their hospital subscriptions. The State will have taken their money and arranged to have the work done according to its own ideas, and without any regard to the employer's wishes.

The certain result will be a large decrease in subscriptions to our hospitals. Large commercial concerns, railway companies, &c., will no longer have any inducement to subscribe, and will probably reduce or withdraw their subscriptions.

What Mr. Lloyd George states about the increased private benefactions to hospitals in Germany since the German Insurance Act has no relevance whatever, for the German hospitals are not voluntary, but State institutions, and do not even now depend upon individual charity for their existence as ours do.

Probably the State must have recourse to the hospital in the end, as it cannot obtain efficient treatment elsewhere, in which event there are two questions which should be answered :—

1. Should not the State refund to the hospital the cost thus thrown upon it for doing work which the State itself undertakes?

2. Should not the honorary staff be paid for the work which they do? For how can one group of medical men be compelled by the State to do Government work for nothing while another group in the same district is being paid for doing precisely similar work?

The Bill is, in fact, a large stride towards the nationalisation of hospitals, which may be good or bad in itself, but should, at all events, be undertaken with our eyes open.

Now, as to Education. The efficiency of medical education at present altogether depends upon our clinical hospitals, and if they suffer under this Bill, medical education will suffer accordingly, and the State will obtain fewer and less competent medical men.

Already the number of men annually admitted to the Medical Register has decreased from an average of 1,455 for five years ending 1895 to an average of 1,117 for five years ending 1910.

In concluding this somewhat desultory Address, I desire to impress upon my hearers my belief that the Bill *will* pass in some shape or form, and that the Medical Profession cannot prevent its passing, but that the Act will be absolutely useless if it does not receive the cordial support of our profession, so that we occupy a very strong position, and can, if we are united, compel the Government to deal fairly with our just and reasonable objections.

The amendments which seem to me absolutely necessary are the following :—

1. The Medical Profession should be adequately represented on—

(*a*) The Insurance Commission.

(*b*) The Advisory Committee.

(*c*) Every Local Health Committee.

2. " Medical benefit " and " maternity benefit " should be administered by the Local Health Committees, and not by " approved societies."

3. The arrangements should, if practical, permit the insured having a free choice of a medical practitioner out of those willing to undertake the work.

4. Hospitals and other charitable institutions should at least be put in the same position as sanatoriums in respect to subscriptions and donations under the Act.

5. Proper surgical dressings and appliances should be included, as well as proper and sufficient drugs and medicines.

6. Medical benefits should include provision for consultations and operations and institutional treatment.

7. Medical benefit should be restricted to those whose total income does not exceed a certain fixed amount.

8. Deprivation of sickness benefit should involve deprivation of medical benefit.

9. The capitation fee type of "contract" practice should be, so far as possible, abandoned, and payment should be according to work done.

APPENDIX I.

Resolutions adopted unanimously by the meeting of Fellows and Licentiates of the Royal College of Surgeons in Ireland, June 8th, 1911.

"That an income limit of £2 per week be fixed for those entitled to medical benefit."

"That adequate medical remuneration be given."

"That payment of the doctor be made according to work done; or, if this be impracticable, that an arrangement be introduced by which the sum paid to the doctor for each insured person shall be capable of adjustment to meet local conditions, such as in districts of large area and sparse population."

"That (*a*) the Insurance Commission, (*b*) the Advisory Committee, (*c*) every Local Health Committee, should include members who are duly qualified medical practitioners."

"That 'medical benefit' and 'maternity benefit' should be administered by the Local Health Committees, and not by 'approved societies.'

"That in respect of the administration of 'medical

benefit,' the arrangements with such duly qualified medical practitioners as may be willing to serve made by the Local Health Committee should be such as to admit of free choice of a medical practitioner on the part of the insured person; and that in respect of the administration of 'maternity benefit,' the like free choice of the medical practitioner or midwife on the part of the person receiving 'maternity benefit' should be admitted."

"That in respect of the grant of subscriptions and donations to hospitals and other charitable institutions, contemplated in Clause 17 of the Bill, the governing conditions should be assimilated to those set forth in Clause 15 (1) with regard to the administration of 'sanatorium benefit'; and that a sum to be from time to time fixed by the Insurance Commissioners be paid to hospitals and kindred institutions for each day's maintenance of an insured person in such hospital or institution."

"That in respect of the provision to be made for 'the supply of proper and sufficient drugs and medicines' under Clause 14 (2), the supply of proper surgical dressings and appliances should be included; and further that steps should be taken to ensure that the drugs and medicines are of the standard required by the British Pharmacopœia, and that the dispensing of prescriptions is carried out by qualified persons."

"That 'medical benefit' should include provision for consultations and for operations when these are necessary."

"That in case of an insured woman it should be made clear that 'sickness benefit' accrues in addition to 'maternity benefit'; and, further, that in cases attended by a midwife the Local Health Committee is empowered to pay for the attendance of a medical practitioner, should such attendance be called for by the midwife, in accordance with the rules governing her practice."

"That in Clause 59 (7), applicable to Ireland, it should be made clear that 'deposit contributors' are not limited in their choice of medical practitioners to the medical officers of health for dispensary districts."

APPENDIX II.

Resolutions unanimously adopted by the Special Representative Meeting of the British Medical Association on May 31st and June 1st, 1911.

"That the profession should insist upon the following points:—(1) An income limit of £2 a week for those entitled to medical benefit. (2) Free choice of doctor by patient, subject to consent of doctor to act. (3) Medical and maternity benefits to be administered by Local Health Committees, and not by friendly societies. (4) The method of remuneration of medical practitioners adopted by each Local Health Committee to be according to the preference of the majority of the medical profession of the district of that Committee. (5) Medical remuneration to be what the profession considers adequate, having due regard to the duties to be performed and other conditions of service. (6) Adequate medical representation among the Insurance Commissioners, in the Central Advisory Committee, and in the Local Health Committees, and statutory recognition of a local Medical Committee representative of the profession in the district of each Health Committee."

The Representative Body passed also the following resolution:—

"That, whilst approving the main objects of the Bill, and being desirous of co-operating for their attainment, nevertheless, in view of the fact that the present proposals of the Government are unsatisfactory, it is the opinion of this meeting that the Government should be asked to delay dealing with the proposed medical benefits until satisfactory terms have been arranged with the medical profession."

APPENDIX III.

At the Annual General Meeting of the Irish Medical Association in Cork on June 13th, it was unanimously resolved that the following terms should be demanded:—

(1) A total income limit of £2 a week for those entitled to medical benefits.

(2) Free choice of doctor by patient, subject to consent of doctor to act.

(3) Medical and maternity benefits to be administered by Local Health Committees, and not by friendly societies.

(4) The method of remuneration of medical practitioners adopted by each Local Health Committee to be according to the preference of the majority of the medical profession of the district of that Committee.

(5) Medical remuneration to be what the profession considers adequate having due regard to the duties to be performed and other conditions of service.

(6) Adequate medical representation among the Insurance Commissioners in the Central Advisory Committee and in the Local Health Committees, in the latter such representation to be one-fourth of the entire Committee, and statutory recognition of a Local Health Committee representative of the profession in the District of each Health Committee.

(7) That a Special Insurance Commission be instituted for Ireland.

(8) Extra provision to be made for special services such as :—(*a*) Anæsthesia ; (*b*) Operations ; (*c*) Consultations ; (*d*) Night Work.

And a deputation was appointed to interview the Chancellor of the Exchequer and to report to a mass meeting of the whole Irish medical profession on June 30th, 1911.

ART. II.—*Clinical Reports of the Rotunda Lying-in Hospital, Dublin*, 1909-1910.[a] By ERNEST HASTINGS TWEEDY, F.R.C.P.I. ; Outgoing Master of the Hospital.

MATERNITY REPORT.

THE Report for 1909-1910 is my seventh and last. Like its predecessors it shows continuous progress in the activities of the hospital. There were 2,524 admissions

[a] Read before the Section of Obstetrics in the Royal Academy of Medicine in Ireland on Friday, May 22, 1911.

to the maternity wards and 2,222 deliveries. In my predecessor's last year the numbers were 1,694 deliveries—528 fewer patients than now. The morbidity of 2.61 per cent., a percentage practically the same as last year, and these two years mark the best results that I have been able to obtain. They show a distinct improvement as compared to that of my first year when the morbidity was 10.7 per cent. It must be remembered that these results have been obtained without structural alteration in the hospital, and by methods which can be, and are, applied in general practice. It will be interesting to note future results, to see if the structural improvements which are about to take place in the labour ward will have the effect of still further reducing the morbidity.

A word of warning is here necessary, for unless there is close supervision on the part of the Master and his assistants there will be the greatest tendency to slacken in the precision of recording the temperature and pulse. I experienced great difficulty in this particular during my first year, and indeed on one sister was never able to impress the importance of accuracy in this particular. A more recent experience will serve to illustrate my meaning. On taking up my appointment at Steevens' Hospital I was struck by the apparent excellence of the results in the maternity ward, as evidenced by the range of temperatures. It was not until I was in the hospital some months that it occurred to me to ask the method of taking temperatures. I then learned that no attempt was made to carry out the suggestions of the British Medical Association. The half-minute thermometer was not used. Axillary and not mouth temperatures were taken. No definite time was set apart for recording temperature and pulse, nor was there any rule as to the length of time the thermometer should remain in place.

Some time after this (having completely forgotten that I caused a change to be made) I remarked to the sister that the ward did not show the healthy condition to which I had become accustomed. The sister said the patients

were doing as well as ever, the apparent difference resulting from the manner of taking the temperature.

The basis of our classification as our method for the diagnosis of eclampsia was fully described last year. All women who die after the sixth month, and who have had one or more fits during their illness, are classed as eclamptics. If recovery occurs they are not considered to have had eclampsia if they do not exhibit marked albuminuria, or if they give a history of previous fits unassociated with pregnancy. In the past we have not kept a record of recovery from convulsions not due to eclampsia, and are, therefore, unable to say how many cases have been diagnosticated as epilepsy or hysteria. It is certain that no year has passed without one or more of these cases occurring. During the period covered by this Report three women, who had developed fits in the hospital and left the institution well, have been excluded from our eclamptic list.

Fourteen women were treated for eclampsia with no death, making a series of twenty-nine cases extending over two years and ten months without any maternal mortality. The suggestion has been made that these results depend on the fact that the disease in Dublin is of a milder nature than elsewhere. A little consideration shows how untenable is such a statement. Since the foundation of the Rotunda Hospital there is no record of such a number of cases spread over so long a period with no mortality. The mortality was 35.3 per cent. before Sir William Smyly re-introduced the morphine treatment. For my time the mortality was 8.11 per cent., six deaths in 74 cases, and there is no doubt that this comparatively small mortality could be materially lowered by adherence to the strict details of method we have followed for the past three years. Formerly nurses were permitted to care for the patient, but now, in severe cases, there is in addition a member of the staff or a specially instructed student.

Some of our patients died in the eclamptic fit, and on a

former occasion I stated that this should not occur. Death is caused by suffocation due to falling back of the tongue and spasm of the glottis induced by a collection of mucus in the back of the throat—a condition not unknown in ether or chloroform anæsthesia. To prevent such an occurrence we keep the patient on her right side with the cheek resting on the pillow. This allows the escape of secretion through the mouth. If respirations cease and cyanosis is marked, the attendant turns the patient on to her abdomen with her head and shoulders hanging over the edge of the bed, making the face look downwards. As a result of this manœuvre fluid pours out through the mouth and nose and inspiration immediately follows. It is sometimes necessary to aid the re-establishment of breathing by artificial respiration and inhalation of oxygen—a cylinder of which should always be kept beside an eclamptic patient.

All of our fourteen patients recovered. Morphine, beginning with half a grain, followed at frequent intervals with one-quarter grain doses, was given. Six patients received stimulation as represented by atropine, digitalin, whisky by rectum, and hypodermics of ether. One had scopolamine with the morphine. Eight had gastric lavage and purgatives by stomach tube, ten rectal lavage, and nine sub-mammary infusion of sodium-bicarbonate solution. Six had linseed meal poultices to the loins. One patient required artificial respiration. All forms of eclampsia are represented—*ante*, *intra*, and *post-partum*—with combinations of each.

Three patients were delivered with forceps when the os was fully dilated; one woman had twins, both of which were delivered with forceps. Labour was never induced. Starvation was rigidly enforced. No fluid (water, croton oil, &c.) was ever placed in the mouth of an unconscious patient.

Last year I drew attention to the remarkable association which seemed to exist between the ingestion of food and the convulsive seizures. "In nearly every case

efforts to empty the stomach and bowels have been rewarded by the removal of large quantities of undigested and indigestible material, frequently of a vegetable nature. Thus, potato skins, lumps of apparently raw cabbage, currants, and orange pulp have been removed by gastric and rectal lavage. Their removal is usually associated with benefit.'' Since this was written our attention has been focussed on this point, and I now believe myself to be in a position to state that eclampsia is due to food acting as a poison, and that no food can be given with safety when convulsions have manifested themselves. We knew this as a matter of experience last year, but as this experience had not been carefully recorded it is worthless to prove the accuracy of our observations. The following cases are so remarkable that it is impossible to ignore their significance.

L. C. had eight *ante-partum* convulsions followed in forty-two hours by forceps delivery. She was conscious for forty-one hours before delivery, which occurred at 6 55 p.m., March 17th, 1910. Two hours after delivery she was given one ounce of milk, and received four pints in all within the next twenty-eight hours. At 1 30 o'clock a.m. on March 19th, the patient showed every sign of severe intestinal toxæmia, a rapid small pulse, marked abdominal distension, sweating and mental aberration, amounting almost to delirium. She had one or two irregular convulsions, which resembled hysterical manifestations more than eclamptic fits. At 2 30 a.m. she had a severe convulsion, followed by two more within an hour, after which her pulse rose to 170, and was for a time so fast and small as to be practically uncountable. A large quantity of very sour curd was washed out of the stomach, and thorough rectal lavage brought away considerable fæcal matter and flatus. Following this she recovered consciousness for thirty-six hours, during which time she got no food.

Then followed the third group of convulsions, amounting in all to more than 100. Her bowels had not moved for thirty-one hours; abdominal distension was again a marked feature.

So far as we know, she received nothing in the way of food during this time, and we must, therefore, conclude that milk curds were still retained to some extent in the intestines, for the recurrence of abdominal distension could be accounted for only in this way.

A. R. had four *ante-partum* fits, followed in twelve and a half hours by forceps delivery, at 1 30 p.m., September 15th, 1910, after which she regained consciousness in six hours. Sixty-nine hours after regaining consciousness she was given one ounce of milk, five ounces at the end of one hour, and again five ounces in three hours. Half an hour after the last dose there was a recurrence of severe convulsions—three within an hour. They yielded to our usual treatment, and she remained free from them for another thirty-six hours. She was conscious for thirty-three hours. Four ounces of whey was then given, and within three and a half hours following this another group of five convulsions occurred.

Our best results have followed since the danger of giving food has been kept clearly in mind, and the practical conclusion arrived at is that a patient may be permitted to abstain from food for days if necessary. Heart failure will more certainly result from toxæmia than from inanition.

Delivery by the breech was accomplished in seven cases. One of these had placenta prævia, for which the usual treatment was adopted. Version was performed four times for prolapsed cord in contracted pelvis. All these children were born alive. One of them, a 5⅝ lbs. child, delivered with great difficulty through a 6½ cm. simple flat pelvis, had the whole side of its head crushed in by the promontory. This depression was raised with one blade of a bullet forceps. The child died three days later, and the autopsy showed the skull in good position apparently undamaged, and no marks of injury to the brain. This furnishes a splendid example of the safety of the method which I introduced several years ago. In the other cases the true conjugate varied from 8 to 9½ cm., and the children from 5¼ to 8¾ lbs.

Two dead children were perforated—one in a woman with a 6 cm. pelvis, the other after forceps had failed to deliver. Her conjugate was 9 cm.

Three children were delivered with forceps, one dead. The woman was sent in from the extern maternity with membranes ruptured thirty hours; c.v. $7\frac{4}{5}$ cm. The other two were both cases of general contraction.

Classical Cæsarean section was performed once. There were six cases treated by one of two methods, to which I particularly wish to call attention—one, true, sub-cutaneous pubiotomy, and the other extra-peritoneal Cæsarean section. The latter I have performed twice this year and once the year before.

In sub-cutaneous pubiotomy Bumm's sharp needle is pushed from below upward without any preliminary cutting. It is a simpler, more aseptic, quicker, and less bloody operation than that of Döderlein. In the latter the larger shoulder of the needle pushes back against the bladder, and is very likely to injure the delicate plexus of veins. It is also impossible to insinuate the blunt and rather clumsy needle end between the periosteum and the bone, and this end almost always bursts its way through these delicate vessels, exciting free hæmorrhage.

The two open incisions also constitute a complication, for they do not always heal by first intention, and are a frequent source of morbidity in the puerperium. The avoidance of hæmorrhage converts a serious operation into one that cannot be surpassed in simplicity. The extensive lacerations which mysteriously arise in the vulva and vagina, and which have been noted by all operators, cause the most serious complications of pubiotomy. They are due (as I have definitely proved) to the rapid bursting out of hæmorrhages caused by needle injuries. This hæmorrhage can be avoided by the careful use of a sharp needle.

In respect to the two cases of extra-peritoneal Cæsarean section no other operation would exactly have taken its place under the circumstances, and men are in error who consider that it has no indications apart from classical

Cæsarean section. When Cæsarean section and pubiotomy are contra-indicated, the former by prolonged labour with membranes ruptured, the latter when the os is not fully or almost fully dilated, extra-peritoneal Cæsarean section has its special indication. Also, in those cases where classical Cæsarean section would be indicated but for the suspicion of infection as a result of vaginal examinations before admission to the hospital, extra-peritoneal Cæsarean section is the alternative to perforation. Pubiotomy is preferable if the size of the pelvis and the condition of the os permit it. The advantages of the extra-peritoneal operation are—(1) The avoidance of perforating a living child, whose death in no way ensures against maternal death from sepsis. (2) The intestines are shut off from the field of operation. (3) The amount of blood lost is very slight, and the scar is not in a dangerous position should subsequent pregnancy occur. (4) There is no possibility of adhesions forming between scar and intestines, or of suppuration in the scar causing a flow of septic material into the general peritoneal cavity. (5) It can be performed safely after the membranes have ruptured and labour is far advanced ; in fact, a well-formed lower uterine segment makes the operation easier. Much has been made of the opening up of the cellular tissue and its liability to serious infective processes. Such strictures, though true of Döderlein's operation, do not apply to that of Selheim, and in the operations I have performed there was no more opening up of cellular tissue than obtains in classical Cæsarean section.

HYSTEROTOMY CASES.

E. L. was admitted from the extern department twenty-five hours in labour, with membranes ruptured and a well-marked lower uterine segment. Eight different men had made vaginal examinations. The head was unfixed and markedly over-riding. I had performed a pubiotomy previously on this woman, and recognised at that time that the degree of contraction, 6.5 cm. C.V., constituted a contra-indication to the operation. In a subsequent pregnancy,

version and perforation of the aftercoming head had been performed in the extern department. This was obviously a case where classical section exposed the woman to an added risk of sepsis, and under the circumstances there seemed no alternative but hysterectomy. A living child was born. That the fear of sepsis was not unfounded was shown by the fact that the abdominal wound suppurated. The patient made a good recovery, and was exhibited at the Section of Obstetrics of the Royal Academy of Medicine in Ireland, at the meeting at which I showed my pubiotomy cases.

M. G. was delivered by symphysiotomy in 1903. Two subsequent pregnancies terminated in normal delivery. Pregnant for the fourth time, she was admitted in strong labour with the head unfixed. We again awaited normal delivery, allowing labour to go on for twenty hours. She was in Walcher's position continuously for nine and a half hours with a tight abdominal binder. By this time the os was fully dilated, there was œdema and congestion of the vulva and vagina, the maternal pulse 86, and the temperature 99°. Bandl's ring reached almost to the umbilicus; the head showed no signs of fixing; a large caput had formed, and the fœtal heart had risen to 170 between pains.

Pubiotomy could have been performed in this patient as the conjugate vera was 8 cm., but we feared abnormal adhesions of the bladder because of her former symphysiotomy. She left the hospital perfectly well on the eighteenth day.

CONTRACTED PELVES.

We record 24 cases of contracted pelvis, each carefully measured with Skutsch's pelvimeter. This is the largest number that has ever been reported in the hospital in a single year. Sir William Smyly long ago predicted an increase in the frequency of contracted pelvis as a result of the greater prevalence of bottle-feeding in Ireland. This may have some bearing on our present figures, but I am inclined to attribute it to a greater watchfulness on the part of the Assistant Masters and Staff. We never record contractions unless they are greater than the first degree—

that is, unless the true conjugate is less than $3\frac{3}{4}$ inches. This excludes a number of cases where it is customary to induce premature labour, cases in which we consider we obtain better results in permitting natural labour to occur. Five patients with conjugate diameters ranging from 8 to 9 cm. delivered themselves naturally of full-term children weighing from $5\frac{3}{4}$ lbs. to $7\frac{1}{4}$ lbs., the largest child through the 8 cm. pelvis. One of these cases resulted in natural delivery by the vertex after a transverse presentation had been changed to a vertex by external version; labour had just started when this was done. The membranes ruptured ten hours before delivery, and the second stage lasted only one hour. The fœtal heart was 132 at the beginning of the second stage, up to which time the head had not fixed by its largest diameter. When the head was born the cord was twisted very tightly about the child's neck. The child was born dead with an extensive cerebral hæmorrhage.

One other patient delivered herself normally of a $7\frac{3}{4}$ lb. child. This was the second spontaneous labour after Döderlein's pubiotomy in 1907. Before the pubiotomy the pelvic measurements were 7.5 cm. c. v. and 12 cm. transverse. She refused to permit herself to be measured after the birth of her child, and we, therefore, are in ignorance as to the present size of her pelvis. Bony union is shown by the X-ray photograph. Pubiotomy could have been performed in this patient as the conjugate vera was 8 cm., but we feared abnormal adhesions of the bladder because of her former symphysiotomy. She left the hospital perfectly well on the eighteenth day.

The greatest change in the treatment of sepsis has been in the free employment of small doses of vaccines in acute cases. Formerly we administered these vaccines in chronic cases alone. The results are dealt with in the Pathological Report.

Scopolamine has been used for the last two and a half years of my Mastership. Last November my Assistants reported 100 cases of scopolamine anæsthesia in primi-

paræ. We are still strong advocates for intelligent administration.

Other cases of interest are Cæsarean section and hysterectomy for myoma obstructing labour; removal of very large ovarian cyst at full term and delivery by forceps within twenty-four hours of a living child; cure of spina bifida by operation; two cases of prolapse of the cervix complicating pregnancy in labour; and a placenta weighing 4 lbs. It is also worth noting the great success that has attended the treatment of prolapse of the cord. It furnishes an admirable indication of the splendidly efficient work performed by my Assistant Masters. To them, too, I am indebted for all the difficult and more important work expended on this Report. I return them my best thanks, and sever our working partnership with much regret.

TABLE No. I.—*Maternity Department.*

—	Nov.	Dec.	Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Total
Total deliveries -	160	161	167	162	197	165	188	185	217	199	190	156	2,147
Total abortions -	6	6	7	5	7	6	6	2	9	4	7	10	75
Not in labour -	12	20	26	19	26	29	31	22	29	38	24	26	302
Total	178	187	200	186	230	200	225	209	255	241	221	192	2,524

TABLE No. II.—*Nature and Number of Cases Treated in the Extern Maternity.*

Total number of Labours -	2,259	Operations—	
Abortions and Miscarriages	280	Version - - -	17
Hydramnios - -	4	Forceps - - -	28
		Manual removal -	13
Presentations—			
Persistent occipito-posterior - -	27	Children Still-born—	
Face - - -	9	Fresh - - -	56
Breech - - -	55	Macerated - -	21
Transverse - -	7		
Twins - - -	34	Infantile Conditions—	
Prolapse of funis - -	12	Hydrocephalus - -	5
Placenta prævia - -	9	Anencephalus - -	2
Accidental hæmorrhage -	6	Spina bifida - -	1
Post-partum hæmorrhage -	22	Meningocele - -	1
Lacerations of perineum -	169	Hare-lip and cleft palate	3
		Papyraceous fœtus -	1

Table No. III.—*Extern Mortality.*

Name	Age and Para	Date of Delivery.	Date of Death	Cause of Death	Remarks
		1910	1910		
M. B.	35 years, X.	Feb. 23	Feb. 23	*Post-partum* hæmorrhage; shock	Moribund when extern assistant arrived
M. D.	25 years, III.	March 24	April 9	Broncho-pneumonia; sepsis	— —
B. R.	28 years, IX.	March 30	March 30	Accidental and *post-partum* hæmorrhage; secondary collapse	Made primary recovery from shock after *post-partum* hæmorrhage, and then collapsed in 3½ hours
K. K.	27 years, V.	April 15	May 2	Chronic heart and kidney disease	— —
K. F.	29 years, VI.	June 12	June 12	*Post-partum* hæmorrhage	Moribund when extern assistant arrived
A. K.	34 years, VII.	Sept. 23	Oct. 2	Sepsis	Incomplete fetid abortion cleared out, with temp. 102° and pulse 110

TABLE NO. IV.—*Showing Nature and Number of Cases Treated in Intern Maternity.*

Total admissions	2,524
Total deliveries	2,222
Primiparæ	786
Abortions and miscarriages	75
Hyperemesis	4
Hydramnios	4
Hydatidiform mole	1
Placenta weighing 4 pounds	1
Presentations—	
Occipito-posterior	18
Face	4
Brow	2
Breech	55
Transverse	9
Twins	32
Prolapse of funis	19
Hæmorrhage—	
Accidental	2
Unavoidable	10
Post-partum	33
Prolapse of cervix	2
Hæmatoma of vulva	1
Rupture of vagina	1
Laceration of cervix (operative)	1
Laceration of perineum—	
Complete	2
Incomplete primiparæ	458
„ multiparæ	206
Failure of primary union	24
Adherent placenta	17
Retained cotyledon	2
Ovarian cyst obstructing delivery	1
Myoma obstructing delivery	1
Contracted pelvis	24
Operations—	
Induction of labour	6
Episiotomy for central tear	3
Cæsarean section	2
Hysterotomy	2
Subcutaneous pubiotomy (Bunner)	4
Operations—*con.*	
Perforation and cephalotripsy	2
Decapitation	1
Forceps	93
Version	20
Eclampsia	14
Epilepsy	3
Mania	1
Melancholia	1
Puerperal ulcer	4
Phlegmasia	1
Morbidity—	
B. M. A. estimation	4.33
Rotunda estimation	2.61
Mortality—	
Maternal	4
Infantile, died in hospital	27
Stillborn—	
Recent	26
Macerated	43
Putrid	2
Infantile conditions—	
Anencephalus	6
Spina bifida	4
Cephalhæmatoma	7
Fractured humerus	1
Ophthalmia	1
Talipes	9
Umbilical hernia (large)	1
Absence of hand (left)	1
Depressed fracture of skull	2
Icterus neonatorum (fatal)	1
Rupture of funis	1
Supernumerary thumbs	1
„ toes	1
Secondary hæmorrhage from cord	1
Brachial palsy	1
Undescended testicle (left)	1
Webbed toes	1
Dextrocardia, rudimentary lungs, absence left half of diaphragm, intestines in pleural cavity	1

(*To be continued.*)

ART. III.—*The Medical Inspection of Schools.*[a] By DOUGLAS MACLEOD MOFFATT, M.A., B.Ch., B.A.O., M.D., Univ. Dubl.; Senior House Surgeon, Borough Hospital, Bootle, Lancashire.

FOR some time past I have been engaged in the medical inspection of the public elementary schools in Bootle, and perhaps a few remarks in connection with this important branch of State Medicine may prove of interest, more so since the exigencies of the Treasury seem likely to forbid its extension to Ireland, where its need is severely felt.

The growth of this department of State Medicine in the United Kingdom has been slow but progressive. As far back as the end of the seventeenth century John Locke emphasised the fact that physical fitness lay at the foundation of education. One of the earliest scientific contributions to the question was that of Ware, who in 1812 published a report on the eyesight of school children in Chelsea. The investigations pursued by Hermann Cohen in 1866 into the eyesight of 10,000 children in Breslau may be considered the starting point of the modern systematic examination of the conditions of school life.

In 1883 the first school doctor was appointed in Germany, while in France the medical inspection of schools was instituted about the same time for all departments. It was not until 1890 that a School Medical Officer was appointed by the London School Board, and Bradford followed this example in 1893. The Education Act (Defective and Epileptic Children), 1899, furnishes "the first instance in which statutory powers in connection with school administration was granted to a medical officer." This Act laid upon Education Authorities the power of discovering such defective children by the employment of a duly qualified medical man. The Act was not obligatory, but merely permissive in character.

The question of the national health and physique undoubtedly stimulated public interest in the matter of

[a] A Thesis read for the Degree of Doctor of Medicine in the University of Dublin, April 24, 1911.

school hygiene, and the reports of several commissions may be regarded as having led up to the establishment of the medical inspection of schools. Such were the Report of the Royal Commission on Physical Training (Scotland), 1903, the Report of the Interdepartmental Committee on Physical Deterioration (1904), the Report of the Interdepartmental Committee on Medical Inspection and Feeding of Children attending Public Elementary Schools (1905).

The Education (Provision of Meals) Act was passed in 1906, and in the following year the Education (Administrative Provisions) Act laid upon Education Authorities the duty of providing medical inspection of school children, and also the power under certain conditions of treating defective children.

From the first the Board of Education has insisted upon the fact that the medical inspection of the children is but a part of school hygiene which in turn is closely connected with the hygiene of the home and the health conditions of the people in general. Accordingly, it has been found advisable, or even necessary, that the department of the school medical officer should work in harmony and co-ordination with that of the sanitary authority, and for this reason many education authorities have appointed their medical officer of health to act as school medical officer.

A perusal of the reports of the Commissioners of National Education in Ireland will show what room there is for the introduction of this system of inspection into the educational system of Ireland. In 1906 they allude to the fact that Belfast, despite its prosperity and industries, is "the most backward part of the British Isles in the matter of school accommodation," while in Dublin many of the schools were so unsuitable that the only remedy would be their destruction and replacement by new houses. In 1909 the number of schools in operation was 8,401, of which no less than 5,237 had only one room, and only 5 per cent. had three or more rooms. In addition to 236 cases where grants had been made or were under investigation, "there are fully 600 cases of unsuitable school buildings where managers have not yet applied for grants apart from between 2,000 and 3,000 cases where much

needed improvements in the form of additional accommodation or provision of class rooms are required. In many cases where new houses are required the existing buildings are mere hovels: some have earthen floors and thatched or broken roofs unceiled within, and others are badly lighted and ventilated, possessing insufficient floor and cubic space for the numbers in attendance, and destitute of sanitary arrangements." Such facts as these have been pointed out again and again in their reports, and public interest will be aroused to a sense of what is required only when the local authorities become responsible for primary education in Ireland. It is small wonder, indeed, that the tuberculosis rate in Ireland remains one of the highest in the civilised countries of the world, and that there is a frequency of epidemics of the infectious fevers in the schools.

The condition of the Day Industrial Schools is much more satisfactory. There is no routine medical inspection in the "intermediate schools," many of which have private doctors. The majority of these schools are good, but the inspectors of the Intermediate Board who may call attention to the condition of the accommodation, ventilation, &c., of the schools are not medical men, and the training of the teachers employed is not one which insists upon any knowledge of hygiene. It is true that hygiene figures in the list of subjects for examination, but only for girls, and then it is bracketed with domestic economy or physiology. According to the last report of the Board, only 644 out of a total of 3,656 girls were examined in these subjects, so that it can hardly be said that they receive adequate attention in the schools. It would seem that the dire necessity which encompasses teachers to cram their pupils to the degree of knowledge sufficient to produce a pecuniary offspring leaves them little time to study the golden rules of hygiene or to inculcate lessons which will help to produce the *mens sana in corpore sano*. There has been some discussion as to the occurrence of evil results from over-pressure in these schools. The attention devoted to outdoor games fortunately helps to reduce the ill effects of overwork, and perhaps the majority of pupils are by no means prone to

overwork of a mental nature, but cases have undoubtedly occurred which can only be put to the credit of this educational system.

The Board of Education has drawn up a schedule for the medical examination in the schools so as to secure, as far as possible, uniformity in the results chronicled in various areas.

In the first place, the previous medical history of the child is noted, and also the occurrence of any disease since entering school. The family history can be recorded if noteworthy—*e.g.*, in the case of mental defects or tuberculosis. The age, height, and weight of the child are recorded, and then a brief systematic examination of the eyes, throat, nose, chest, and general condition of skin, head and body. The Board prescribe only a minimum of examination, and the average time devoted to each child will range from five to ten minutes, so that a thorough clinical examination is not practicable. The following are some of the more interesting points in connection with the medical inspection :—

Tuberculosis.—This is a subject which is of special interest to Ireland, and the systematic examination of school children and schools leads one to hope that some reduction may be possible in the death-rate from phthisis by the chance thus afforded of detecting early cases and of investigating possible sources of infection. Hitherto phthisis has been regarded as a somewhat rare disease amongst school children, and it is unfortunate that the first signs and symptoms are so vague as to render early diagnosis a matter of difficulty. The figures given in the first annual report of the Medical Officer to the Board of Education show that the percentage of tuberculosis amongst the cases at routine examination is 1.02, while that in cases specially selected by teachers, &c., is 1.97. The returns from different districts vary considerably—from .12 per cent. up to 4.3 per cent. in Worcestershire, where special attention was devoted to this subject. These figures must be regarded with suspicion, for, as pointed out before, the time and circumstances under which routine inspections are held preclude a thorough examination.

It is advisable to select for further exhaustive examination

all children whose general health and pulmonary conditions lead one to suspect the possibility of tuberculosis. These children can be kept under observation and be examined at intervals, which ensures that their condition will receive proper medical attention. The homes of such children and of all those who have a history of tuberculosis in the family can be visited by a sanitary inspector, and the parents can thus be educated to a proper realisation of the dangers of tuberculosis, and also of the means to prevent infection and stay the progress of the disease.

The question of the exclusion of tuberculous children from school must be considered according to the merits of each individual case. Exclusion, of course, is indicated where there is a risk of the child spreading the infection by coughing and expectoration. More often the child stands a better chance of physical improvement by attendance at school and the provision of meals than if left to the mercies of careless parents and an insanitary home.

Some authorities have provided "open air" schools which are attended by tuberculous children - children who suffer from that vague disease "debility," &c.—and gratifying results have been published, not only from an educational but also from a medical point of view.

These schools are built on specially provided sites, and are equipped in a simple and economical manner. The children are medically examined from time to time. One of the chief features is the feeding of the children on hygienic lines, the parents, as far as possible, being invited to contribute to the cost.

There is no doubt that the decline in tuberculosis is coincident with the better general hygiene of the cities, and so a reduction may be expected when the elementary schools are such as to give the child proper hygienic surroundings. The provision of suitable games and exercises tends to improve the physique, and very much benefit has been derived from the provision of meals for children who are insufficiently fed at home.

Mentally Deficient Children.—It is stated that .83 per cent. of the elementary school population of England and Wales

is mentally defective. The percentage varies much in different parts of the country—*e.g.*, at Durham it is given as .24 per cent., whereas at Dublin it runs as high as 1.85 per cent. To some extent this variation may coincide with the variation in the incidence of insanity.

The importance of excluding children of a low mental grade from the ordinary day schools is now recognised, and in the routine inspection of schools one has to bear in mind several classes of mentally defective children.

The pathology of the milder mental defects may be briefly described as consisting of an irregular arrangement, incomplete development, and numerical diminution of the cells of certain areas of the brain. Acting upon the developing brain are two main forces, which may be termed intrinsic and extrinsic—viz., heredity and environment. Now, according to Tredgold, there are three common antecedent conditions in the case of the mentally defective—(*a*) an antecedent mental defect, insanity, epilepsy ; (*b*) tuberculosis ; (*c*) alcoholism.

In the family history of the feeble-minded there is usually present a marked tendency to one or more of these conditions. Again, we may class the intrinsic forces as (*a*) pre-natal, such as the presence of toxins in the mother's circulation ; (*b*) natal or traumatic, such as the occurrence of asphyxia, hæmorrhage during birth ; (*c*) post-natal, the action of the toxins of the infectious fevers upon the brain. Strümpell has drawn special attention to the effects of acute polio-encephalitis in this connection.

The environment of slum life is stated to be seldom a factor in determining mental defect, but it undoubtedly may cause a retardation of development mental and physical, which, however, changed hygienic conditions can ameliorate.

We may differentiate the deficient children roughly into three classes :—

(*a*) Those who are merely backward and dull, and can derive benefit from the ordinary educational curriculum. These children are quite fit to look after themselves, and their backwardness is often only apparent during school hours.

(*c*) Those who can derive benefit from special training with a minimum of literary instruction and a maximum of handicraft.

(*d*) The non-educable, incapable of benefit from any school training.

The treatment of these defective children is of the utmost importance. The teaching of the various eugenic societies which are springing up throughout the country will do much to educate public opinion in the prophylactic treatment. Radical treatment is, of course, opposed to public sentiment, and, meanwhile, the children must not be punished for their parents' faults. While those other than the first class call for the provision of special schools, it cannot be too strongly emphasised that it is the period following school life which demands the most supervision. It is then that new emotions and thoughts come into being which the normal mind can soon learn to understand and keep in check, but which, in these defectives, tend to further upset the mental and moral balance, with the result that these feeble-minded adults will continue to perpetuate in their offspring the damage to the State and posterity.

Special schools have been provided for physically defective children, such as those who suffer from some permanent defect caused by tuberculosis of the spine, knee, or hip, or paralysis, &c. Manual training holds the chief place in these schools.

The Manchester Education Committee went so far as to provide a "school of recovery," where early stages of disease are treated until the child is fit to attend an ordinary public elementary school. Such an institution is an excellent one, and superior to the ordinary special day school, but there are many difficulties in the general adoption of such a method.

Teeth.—The condition of the teeth amongst school children is lamentable. It is seldom that one finds any evidence of conservative dentistry or proper attempts to keep the teeth clean. Parents in general fail to realise the ill effects which carious teeth have upon the general health. No doubt, improper methods of feeding and unsuitable food are primarily

responsible for this state of affairs, and not much improvement can be expected until the parents are educated to realise this. The work done by many authorities in connection with the prevention of infantile mortality will probably conduce to this. It is curious to note that, as a rule, the best teeth are observed in the poorer children.

The establishment of dental clinics seems absolutely necessary for the treatment of defects revealed at examination. Few parents will consider it necessary to take children to a dentist unless in the presence of a toothache whose resulting discomfort is not necessarily confined to the sufferer alone. Moreover, a qualified dentist is alone able to attend to this work properly. The opinions of medical men as to carious first teeth are very contradictory, and, consequently, the parental mind is left in a chaos of doubt as to what can or should be done.

When one considers that the number of children with decayed teeth, which cannot be saved, increases from about 4 per cent. at the age of seven to about 75 per cent. at the age of thirteen or fourteen, it is high time that some step should be taken to prevent this grave state of affairs.

Throat.—A slight degree of tonsillar enlargement is common amongst school children, while statistics show that 8 to 10 per cent. of children entering school are affected in some degree with adenoids. Digital examination for this condition is quite impracticable, and one has to infer the presence of the growth from the characteristic facies, obstruction to nasal breathing, the arched palate, and other usual signs.

In the milder cases considerable benefit is noted since the introduction of proper breathing exercises in the schools. It is useless to recommend operation unless parents and teachers see that the child makes proper efforts to breathe through the nose; one not rarely meets with cases after operation when the mouth breathing persists and recurrence of the growth ensues.

Statistics show that while 8 to 10 per cent. at the age of five to seven years suffer from adenoids, the percentage falls to 3 or 4 per cent. at the age of thirteen, so that the operation

for adenoids need not be too commonly insisted upon. Proper attention to the breathing will do much good. As Sutherland remarks—"The removal of adenoids for a time took the place of the removal of the foreskin as a cure-all operation, but this surgical epidemic is now subsiding."

Infectious and Contagious Disease.—There is no doubt that the medical inspection of schools will diminish the occurrence of contagious disease. There is no necessity for the teachers to wait for routine inspection. Charts setting forth the usual signs and symptoms of the infectious diseases are distributed amongst the schools, and teachers can thus send home at once any suspicious cases and notify the school medical officer. Herein lies one of the advantages when the Medical Officer of Health acts also as School Medical Officer. On the receipt of notification from the teacher, the case is visited at once by an inspector, and proper steps can be taken for isolation of the case. It speaks well for the teachers that one seldom meets with infectious or contagious cases during the routine examinations.

As regards *Vision*, the routine inspection of the schools show that about 10 per cent. of the leaving boys and girls required treatment from an ophthalmic surgeon. The question of the causation of defective eyesight is interesting and complex, and the school medical officer has it in his power to minimise possible adverse influences, such as defective lighting of classrooms, improper arrangement of desks, &c. The Board sanctions expenditure in providing spectacles for necessitous children certified to require them.

General Cleanliness.—The introduction of medical inspection has given a fresh impetus to the efforts of the teachers in maintaining cleanliness amongst the children, although the condition of the children in this respect is far from satisfactory. It is hard to draw accurate deductions from the figures returned, as parents usually present their children for inspection in an abnormal state of cleanliness, but in some areas 5 to 10 per cent. of the children are reported as "dirty."

The figures dealing with unclean heads are surprising. "Judging from the returns, it may be said in a general way

that of the children examined, approximately one-half of the girls in urban areas and one-quarter of those in rural areas have unclean heads." Such is the summary of the returns for 1909. It is hard to convince some parents that nits are not a normal constituent of a child's head, and very often repeated visits from the school nurse or other visitor are necessary to ensure the parents taking steps to cleanse the head. Habitually "dirty" children may be excluded from school, and parents can be prosecuted for their non-attendance. In regard to these children, a cleansing station, with a small steam disinfector, is advisable, so that the clothing can be disinfected while the child is undergoing a similar process in the bath, for, as a rule, these children possess no other clothes than what they actually wear at school.

In England the Cleansing of Persons Act of 1897 and the Children's Act of 1908 give all the necessary powers for local authorities to ensure the cleansing of verminous and neglected children, and, as has been well stated, "the education of a child has failed in its object if it has not engendered a habit of cleanliness, one of the most important agencies in fostering the feeling of self-respect.

It would be interesting to see how Irish school children would fare in this respect. If one might judge from the average condition of children attending Irish hospitals, in all probability there would be a smaller percentage of dirty children as compared with those in England.

Such then are some of the chief points which strike one engaged in the inspection of school children, apart from the examination of the actual hygienic conditions of the school itself, which is of even more importance. The mere medical inspection of children is, of course, comparatively fruitless if no steps are taken to supply remedial measures for the defects disclosed. While the Act gives local authorities the power, under certain conditions, of providing treatment, the Board of Education enjoins that, as far as possible, use should be made of existing voluntary institutions, hospitals, and the like. They will sanction expenditure such as for the provision of spectacles for necessitous children,

the provision of a school nurse to follow up cases and treat minor defects, or grants to hospitals including, where desired, the allocation of reasonable remuneration to the medical staff working for such institutions, such treatment only to be provided for certified necessitous cases. The question of the establishment of school clinics is one of great delicacy, and involves the interests of the general practitioner to a large extent. The routine inspection of school children at the command of the State has thrown a vast amount of work upon the resident and honorary staffs of the hospitals, and incidentally has further contributed to the abuse of hospitals. It is hard to offer a reasonable solution to the problem of the treatment. Medical men ungrudgingly give their services in the cause of charity, but there is more than the cause of charity in this work. Some hospital committees—presumably composed of laymen—have actually offered to contract with education authorities for the treatment of school children without apparently consulting the interests of their honorary staff. This question, of course, does not concern Ireland yet, but it behoves every medical man to give to it his serious attention, and the whole profession to make a firm stand for the protection of their interests.

The establishment of school clinics would, of course, make the work of the School Medical Officer much more interesting, and would ensure regularity of treatment, especially in regard to conditions hitherto largely neglected, such as ringworm, otorrhœa, sore eyes and sore heads, &c. The first fully-equipped school clinic sanctioned was that at Bradford, where the scheme has apparently worked well and economically. The first dental clinic was established at Cambridge by private munificence in 1907 with very gratifying results.

The essence of medical inspection of schools is that the homes of the children must be visited. It is absolutely necessary that there should be a school nurse or other trained visitor to follow up those cases which are selected by the medical inspector. The parents require to be educated as well as the children. One may conclude with an extract from Circular 576

of the Board of Education:—"One of the main objects of the new legislation is to stimulate a sense of duty in matters affecting health in the homes of the people, to enlist the best services and interests of the parents, and to educate their sense of responsibility for the hygiene of their children. The increased work undertaken by the State for the individual will mean that the parents have not to do less for themselves and their children, but more. It is in the home, in fact, that both the seed and fruit of public health are to be found."

ART. IV.—*Notes on Some Points in the Administration of Anæsthetics.* By J. SINGLETON DARLING, M.D., M.Ch., Dubl.; and C. FLORENCE WILLIAMSON, L.R.C.P.I., F.R.C.S.I., Infirmary, Lurgan.

SINCE August, 1909, we have used hyoscine and morphine before operation in over two hundred cases as a preliminary to general anæsthesia, and think it may be useful to record our experience. We have given the dose only to adults, the ordinary dose being hyoscine gr. $\frac{1}{100}$, morphine $\frac{1}{6}$, atropine $\frac{1}{180}$ hypodermically, one to three hours before operation. In young women the dose of hyoscine has sometimes been as low as gr. $\frac{1}{200}$. The majority of patients have had the previous night gr. 10 each of trional and sulphonal, ensuring them quiet sleep. In fifteen minutes from receiving the hypodermic injection the patient is completely indifferent to his surroundings, and then the final preparations are made, causing him no mental distress. He walks into the operation room (when his condition permits this) without apprehension, is somewhat dazed, but replies intelligently to questions, usually takes the anæsthetic without terror or struggling, and when he wakes up some hours later remembers nothing that has happened, and is surprised that the operation is over. Many patients have no recollection of anything since receiving the hypnotic the night before. Less of the anæsthetic is required, the quieting effect on alcoholics is noteworthy, and post-operative vomiting is much less frequent. In no case have

we had reason to think the dose has produced ill effects, in cardiac cases we believe it has added an element of safety. We have not given it where there has been albuminuria. About half the operations were intra-peritoneal, many being very severe. In the remainder were most of those cases usually falling to the lot of a general surgeon.

Ether by Open Method.—Our experience is limited to fifty-three cases. We have not given it to children, nor to those of whose lungs we have any fear either as regards tubercle or bronchitis. At first we selected the cases carefully; as we have gained confidence we have used it more frequently, and are pleased with the results. Those who are accustomed to use the closed method must be astonished at the easiness of respiration, good colour, rapid "coming out," and almost complete absence of sickness during or after the administration. A dose of atropine beforehand prevents the undue discharge of mucus, which is a drawback to it. Almost the only other drawback as compared with chloroform is the length of time taken before the patient is "under"—this is sometimes fifteen minutes, and usually ten, occasionally as little as five. With this method there is not more struggling or excitement—indeed scarcely so much—as the suffocating feeling is not nearly so great as with the closed method. With the preliminary injection of hyoscine and morphine the great majority take it tranquilly, and anæsthesia is easily maintained throughout a long operation. From the operator's point of view the anæsthesia is all that can be desired. We use the simplest of apparatus—a piece of gamgee tissue, with a hole for mouth and nostrils, covers the face, an ordinary wire mask, covered with eight layers of gauze, a ten-ounce bottle, with a groove cut in the cork, in which a few threads of gauze are placed to act as a wick. The secret of putting the patient "under" with fair rapidity is to pour on the ether freely and continuously, keeping every part of the gauze wet, and as the operation progresses the anæsthetist must watch closely when he lessens the quantity given, as the patient recovers so

quickly from the effects that he may come out prematurely. We have used it in operations for middle ear disease, and often cases where the face must be kept far to one side, and found it not difficult to maintain efficient anæsthesia. There will probably always be many operations where chloroform will be more suitable, but as regards ether, no one who has mastered the few points in technique necessary will ever again use a closed "apparatus."

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

At a meeting of the College held on Tuesday, May 16, 1911, the following gentlemen, having passed the requisite examinations on 3rd February and on 16th instant, were admitted Fellows:—William Gilbert, M.B., Ch.B., Port Elizabeth; Edward Seymour Chapman, M.D., Glasgow; Frederick Henderick Dommisse, M.D., Piquetberg, Cape Colony; Frederick Barnes Elwood, L.R.C.S.E., Belfast; William Tyler Gardiner, M.B., Ch.B., Edinburgh; Alexander Bruce Gordon, M.B., Ch.B., London; Cecil Hibbert, M.B., Ch.B., Godley, Hyde; Ernest Bertram Hinde, M.B., Ch.B., M.R.C.S. Eng., Norwich; John Guy Watts Johnson, M.D., Montreal; George Adam Jolly, M.B., Ch.B., Captain, I.M.S.; George McPherson, M.B., C.M., Major, I.M.S.; Edward Cecil Gordon Maddock, M.B., Ch.B., D.P.H., Captain, I.M.S.; Eric Lachlan Marchant, M.B., Ch.B., M.R.C.S. Eng., Timaru, N. Z.; Arthur Thomas Paterson, M.D., Edinburgh; Stephen Ramchandra Rao, L.R.C.S.E., Edinburgh; Stanley Alwyn Smith, M.D., Liverpool, and Alexander Pirie Watson, M.B., Ch.B., Edinburgh. The Bronze Medal and Microscope presented to the College by Colonel William Lorimer Bathgate, in memory of his late father, William McPhune Bathgate, F.R.C.S.E., Lecturer on Materia Medica in the Extra-Academical School, was awarded, after the usual competitive written examination in Materia Medica, &c., held for the Session 1910–1911, to Mr. George Foster Braithwaite Page, Blackie House, Edinburgh. The annual award of the Ivison Macadam Memorial Prize in Chemistry, consisting of a Bronze Medal and Set of Books, was, after a competitive written examination in Chemistry, held for the Session 1910–1911, made to Mr. John William Irvine, 7 Polwarth Crescent, Edinburgh.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

RECENT WORKS ON SALVARSAN.

1. "606" *in Theory and Practice.* By GEHEIMRAT PROFESSOR PAUL EHRLICH and J. E. R. M'DONAGH, F.R.C.S., Surgeon to Out-patients, London Lock Hospitals. London: Henry Frowde; Hodder & Stoughton. 1911. Large 8vo. Pp. vii + 143.

2. *The Treatment of Syphilis with Salvarsan.* By Dr. WILHELM WECHSELMANN, Medical Director of the Venereal Disease Section, Rudolph Virchow Hospital, Berlin. With an Introduction by PROFESSOR PAUL EHRLICH. Authorised Translation by ABR. L. WOLBARST, M.D., Professor of Genito-Urinary Diseases, New York School of Clinical Medicine. London and New York: Rebman, Ltd. 1911. Pp. 189.

3. *The Experimental Chemotherapy of Spirilloses* (*Syphilis, Relapsing Fever, Frambœsia*). By PAUL EHRLICH and S. HATA. Translated by A. NEWBOLD and revised by ROBERT W. FELKIN, M.D., Late Lecturer on Tropical Diseases, Edinburgh Medical School. London: Rebman, Ltd. 1911. 8vo. Pp. xv + 181.

THE interest in Salvarsan as a remedy for syphilis is still maintained, and as experiences of its use accumulate, fresh works dealing with the drug make their appearance, so that a medical man at present can get practically complete information concerning every aspect, chemical and therapeutical, of this drug without being compelled to make a wearisome personal study of the enormous literature that has already grown up in connection with the subject. We have previously favourably noticed two books which were published some

weeks ago, and three more now claim attention. Although much overlapping necessarily occurs, the student desiring full information should be in possession of all five books.

1. The volume by Ehrlich and M'Donagh is an extremely readable and practical account of the uses of "606." After a short introductory chapter dealing with the series of observations that led up to the introduction of Salvarsan as an antisyphilitic, a detailed account of the various methods of administration is given, the author inclining very much to prefer the intravenous method. The contra-indications to the use of the drug are insisted on, and emphasised in a later chapter of "Warnings." The actual results obtained in various classes of cases are detailed and illustrated by case records. Syphilis of the nervous system and congenital syphilis receive separate chapters, and the book terminates with a short analysis of 270 cases treated by the English author.

2. Wechselmann's and Ehrlich's book covers much the same ground as the preceding. It is in some ways more complete, but is not quite so well adapted to the use of the general practitioner. It contains a magnificent series of sixteen coloured plates, illustrating visually the actual results obtained after injections. After an introductory chapter, Wechselmann gives the results of his experience with 1,400 cases. Contra-indications are discussed, and special attention is given to the effect of the drug in cases where ocular disease exists. Technique is fully dealt with, the author in this case preferring a subcutaneous or intramuscular injection to the intravenous. A very complete analysis of the German literature is given, and is supplemented by a bibliography of the English papers. As a book to which reference may be made to obtain information on any special point in connection with the use of salvarsan, or the results following its injection, we strongly recommend this book.

3. The third book differs from the two preceding volumes. It will appeal more to the pathologist and physiologist than to the practising physician. In order to get a proper grasp, however, of the lines along which Ehrlich has been advancing, it should be read by medical men. It presents a short account

of the long series of investigations which have engaged the labours of Ehrlich and his school for many years. A systematic account of the researches concerning the action of various arsenical compounds on the spirilla of relapsing fever is given. The results of experiments on spirillosis of fowls and on syphilis of rabbits is next dealt with. There are also short clinical and experimental results of the use of salvarsan in cases of relapsing fever and of yaws, while a concluding chapter by Ehrlich deals with the chemistry of the drug, the chemotherapy of trypanosome diseases, and with the technique to be adopted in the practical testing of drugs. The book enables one to realise in a partial manner the immensity of patient work which ultimately led step by step to the discovery of the Ehrlich-Hata remedy.

The Medical Annual, 1911. Bristol: John Wright & Sons. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 8vo. Pp. cxv + 991.

We have much pleasure in once again testifying to the general usefulness of the Medical Annual, which has now reached the twenty-ninth year of its existence. We have found the previous numbers indispensable as reference books, and thoroughly reliable as compilations of current medical thought and practice. Perhaps to the thoughtful mind the most interesting general feature observable during a perusal of the pages of the present volume, and a comparison of its contents with those of the similar volumes of the past ten years, is the striking demonstration of the fashions which are as common in matters medical as in other affairs of life. Each year one finds that some special therapeutic remedy is engaging the mind of the practitioner to the exclusion of other remedies, and that in turn this special remedy is either forgotten and becomes disused, or settles down into its legitimate place as a remedy for a few diseases for which extended and calmer experience has proved its usefulness. It is only fair to add, however, that the compilers of the Annual, as a rule, preserve a calm mental balance in relation to even the most vaunted remedies, and present a judicious summary of all the facts

determined in relation to new drugs and treatments. The actual number of the compilers is thirty-eight, almost all of whom are well known in relation to some special medical branch. The list includes two names from Dublin, and a third is a lately adopted Dublin professor. The work, as usual, is divided into two parts. The second part, which comprises by far the greater part of the volume, is arranged in dictionary form, and tabulates the progress gained in connection with the treatment and investigation of disease during 1910. We have consulted this part under several headings, and have detected no important omissions. It is in fact extremely full and adequate in its treatment of each subject. The first part contains a short review of the new drugs introduced during the year, an article on electro-therapeutics, an interesting article on hormones, a most useful and well illustrated account of the methods of preparing and examining morbid tissues, and a short article on the practice of pharmacy and the sale of medicines.

The entire book is well illustrated: it is strongly bound in the form familiar to most medical men. Appendices contain handy lists of new appliances, of hospitals and asylums in the United Kingdom, of spas and watering places, and much valuable miscellaneous information.

A Pocket-Book of Treatment. By Ralph Winnington Leftwich, M.D., Late Assistant Physician to the East London Children's Hospital. London: Edward Arnold. 1911. Cr. 8vo. Pp. viii + 348.

This is a handy little dictionary of therapeutics which may prove useful to the busy practitioner who desires to rapidly review the treatment of any disease. It is divided into two parts. The first part, some sixty pages in all, deals with treatment in general, including treatment by diet, baths, spas, electricity, serums and vaccines, and the like. Notes are also given on the antidotes to poisons, on incompatibilities, and on special exercises. Needless to say the information conveyed is of a fragmentary nature, and somewhat reminds one of the medical diaries sent out annually by so many

firms of manufacturing chemists. As far as it goes, however, it is useful, and certainly an amazing number of facts to which one may wish to refer in a hurry are contained within the small compass alluded to. The second part of the book, about 250 pages, is a true dictionary of treatment. The diseases are arranged in alphabetical order, and the appropriate remedies for each can be seen at a glance. One of the features of this part of the work is the large number of prescriptions that have been collected. No one who carries the book about and refers to it when going from case to case will be at a loss when called upon to sit down and inscribe a prescription for the inevitable bottle. We may add that the collection appears, as far as we have studied it, to be a good one, and that quack remedies are scrupulously avoided. Nowadays, when prescribing has become an almost forgotten art amongst at any rate junior practitioners, a little book like the present one may well become a boon to many a patient. A posological table concludes the book.

Hygiene and Public Health. By LOUIS C. PARKES, M.D., D.P.H. Univ. Lond., Consulting Sanitary Adviser to H. M. Office of Works, Civilian Sanitary Member of the Advisory Board for Army Medical Services, Medical Officer of Health of the Metropolitan Borough of Chelsea, Examiner in Public Health to the Royal Colleges of Physicians and Surgeons, London, Fellow of the Royal Sanitary Institute; and HENRY R. KENWOOD, M.B., F.R.S. Edin., D.P.H. Lond., Chadwick Professor of Hygiene in the University of London, Medical Officer of Health and Public Analyst of the Metropolitan Borough of Stoke Newington, Examiner in Public Health to the Royal Colleges of Physicians and Surgeons, London, Fellow of the Royal Sanitary Institute. Fourth Edition. London: H. K. Lewis. 1911. Demy 8vo. Pp. xi + 691.

"KENWOOD AND PARKES" has now reached its fourth edition under joint authorship. The book maintains its position as one of the best and most reliable text-books on hygiene in the English language. New matter has been added to bring

the work up-to-date, while some diagrams, which we had come to look on as old friends, have been deleted.

In the section devoted to communicable diseases we note some new pages on syphilis which bring us to the introduction of Ehrlich's "606" and its possibilities in the field of Public Health.

In regard to the prevention of plague and the efforts being made to deal with the problem of the destruction of rats, a timely and significant warning is given that "there is some reason to question the accuracy of the statement that the Danysz bacillus is harmless to man."

Wheat, flour and bread might be treated more fully in view of current newspaper agitation, but the pages on these subjects as they stand should act as a corrective to the overstatements of modern journalism whereby a useful movement is in danger of being brought into ridicule.

We can again cordially recommend the work to all who wish for a reliable work of reference, as well as to students who require a comprehensive, accurate, and readable text-book on Public Health.

New and Non-official Remedies, 1911. *Containing descriptions of articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association prior to Jan.* 1, 1911. Chicago: Press of the American Medical Association. 1911. 8vo. Pp. 282.

This is the 1911 edition of the annual New and Non-official Remedies issued by the Council on Pharmacy and Chemistry of the American Medical Association, and contains descriptions of all articles approved by the Council up to December 31, 1910. There are also descriptions of a number of unofficial non-proprietary articles which the Council deemed of value. The action, dosage, uses and tests of identity, purity and strength of articles are given.

In the arrangement and the scope of individual descriptions, the present edition does not differ widely from the 1910 edition, but it contains about twenty-five additional pages,

these being required to describe the articles accepted by the Council during 1910.

Besides indicating to physicians the proprietary articles which the Council's examination has found to be honestly marketed, and containing accurate descriptions of these articles, all similar articles are arranged under group headings. Thus the physician at a glance can learn that atoxyl and soamin are practically identical articles, and that arsacetin is a closely related body.

Again, the several proprietary solutions of the blood-pressure-raising principle of the suprarenal gland are listed under a general title "epinephrin," and the manner in which the solutions differ from each other can be learned at a glance. In the same way, the medicinal foods are brought together and their relative value is compared.

Enlargement of the Prostate: Its Treatment and Radical Cure. By C. Mansell Moullin, M.D. Oxon., F.R.C.S. Fourth Edition. London: H. K. Lewis. 1911. Demy 8vo. Pp. ix + 176.

In the above-named book a clear, concise description of the anatomy, pathology, and treatment of the various causes of enlargement of the prostate is given. We miss any detailed account of Prof. Young's complete prostatectomy, such as he practices for cases of cancer; if such a description were added to future editions it would add to the value of the book. We notice with pleasure that Mr. Moullin lays stress on the frequency of cancer, stating that he finds the incidence as high as twenty-five per cent. A fuller account of the results of Bottini's operation would also be of interest.

This book should prove of great value to any operating surgeon.

Royal Insurance Company Record of Sports. 1911. Eighth Edition. Pp. 25*a*.

The eighth edition of this work has recently been published. Almost every section of sport is dealt with, and the volume

forms, in our opinion, one of the most accurate, complete, and up-to-date records of sports in existence. Amongst its new features it contains a comprehensive series of notable performances and events of Aviation. The records of many other sports have been largely amplified, while, at the same time, the Summaries and Tabulated Statements, which have always been a striking feature of the book, have been retained.

A Text-book of Surgical Anatomy. By William Francis Campbell, M.D. Second Edition. Philadelphia and London: W. B. Saunders Company. 1911. 8vo. Pp. 675.

The author supplies in this volume a mixture of surgery and anatomy, which may supply a need felt by those who wish to renew their forgotten knowledge.

The work does not appeal either to the anatomist or to the surgeon, but rather to a teacher of applied anatomy. The expense must present a serious obstacle to its free circulation amongst students.

The diagrams are numerous and well chosen. Yet there are some that leave much to be desired—for instance, in fig. 173 we notice the statement that the deep epigastric arises from the common femoral and ascends superficially over Poupart's ligament.

The index is complete, but is open to criticism in that it is not clear enough. There are frequently five or six references after any one name, which means loss of time and temper to the seeker.

Aids to Bacteriology. By C. G. Moor, M.A. (Cantab.), F.I.C., Public Analyst for the County of Dorset and the Borough of Poole, and William Partridge, F.I.C. Second Edition. London: Baillière, Tindall & Cox. 1911. Fscap 8vo. Pp. viii + 240.

The Students' Aids Series, we are told, are designed to assist students in committing to memory and grouping the subjects upon which they are to be examined. The series of foolscap octavo volumes now extends to thirty-six, so that the task

" of committing to memory " assumes somewhat formidable proportions, especially when a volume contains 240 pages, as does that which is now under review.

We have glanced carefully through " Aids to Bacteriology," and the impression left upon our mind is that the book is much more than a mere *aide-mémoire*—it is in fact a very full text-book on the subject with which it deals, and a reliable guide to the practical technique of bacteriological investigation.

The numerous technical terms are very correctly given in most instances, but there are a few slips, such as " *B. diphtheriæ columbarium* " (for " *columbarum* ") on page 103; " *B. tobacci* " (for " *tabaci* "), and " *B. furfuri* " (for " *furfuris* ") on page 167; and " Eczema epizootica " (for " epizooticum ") on page 174.

On the whole, we can recommend this book as a safe guide to the all-important subject of which it treats in a clear and practical manner.

Fractures and Separated Epiphyses. By ALBERT J. WALTON, F.R.C.S., Surgical Registrar, London Hospital. London: Edward Arnold. 1910. 8vo. Pp. vii + 288. Illustrations 101.

THE author says in his preface that this book is intended for students and those first commencing hospital appointments, and deals with fractures and their treatment from a practical aspect. All the usual fractures and epiphyseal separations that occur in the body are taken in order, and their ætiology, treatment, and prognosis are very fully and clearly dealt with. As regards treatment, this is of particular interest, as it represents the line of treatment taught and practised at the London Hospital. Fractures of the skull and spine are not considered, as their chief importance lies not in the fractures, but in the accompanying injury to the brain or cord. Speaking of the general treatment of fractures by massage and passive movements, according to the plan usually known as Lucas Championnière's, he writes: " One may say that the above method (Lucas Championnière's) although extremely useful, and perhaps one of the most valuable, must not be looked upon as the sole means of treatment. It is not applicable to

all forms of fracture, and even when used the massage and movements should be regarded as an adjunct to splintage and not splintage as an adjunct to massage and passive movements." This opinion we can thoroughly endorse, as also what he writes regarding operative treatment, "that open operation is extremely useful, and in many cases gives excellent results, is not to be denied, but, as is the case with massage and passive movements, too much is probably claimed for it, and those who advocate it regard it more as a general method of treatment than as a means to be applied only in special cases. There is no doubt that the majority of cases of simple fracture of the clavicle, humerus, forearm, femur and leg are followed by excellent results when treated by other means."

The illustrations are good, and show clearly the various lesions present; most of them are prints of X-ray photographs of actual cases treated at the hospital, and a special word of congratulation may be offered on the unusual distinctness of these prints. The book has been carefully brought out, and contains few inaccuracies for a first edition. We might point, however, to the following:—32.5 instead of 39.5 on page 134; ilium instead of ischium, page 190, line 19; and diaphysis for epiphysis, page 233, line 2. We can thoroughly recommend the book both to students and to those entering on surgical or general practice.

Ambulance Examination Questions. By D. M. MacDonald, M.D. Bristol: John Wright & Sons, Ltd. 1911. Pp. 24.

This little book should commend itself to Lecturers on First Aid, as it contains some very practical questions, which are classified under appropriate headings. It will be observed it is now in its fourth edition.

Biology, General and Medical. By Joseph McFarland, M.D. Philadelphia and London: W. B. Saunders Company. 1910. 12mo. Pp. 440.

This handbook is of special interest to medical men, as, in addition to dealing with general biology, the author has devoted considerable space to what may be termed medical

biology. Thus blood relationship, infection, immunity, parasitism, inheritance, mutilation, regeneration, grafting, and senescence are amongst the subjects that receive careful attention.

The chapter on "Divergence" may be cited as a good example of clear style; it gives an excellent summary of the various theories as to how living things attained their present forms.

The illustrations are good, and there is a useful bibliography at the end of each chapter.

Outlines of Zoology. By J. ARTHUR THOMSON, M.A. Fifth Edition. Edinburgh, Glasgow, and London: Henry Frowde and Hodder & Stoughton. 1910. Cr. 8vo. Pp. xxii + 855.

THIS is an excellent and well-balanced hand-book of Zoology, suitable for both class-room and laboratory. In addition to the systematic sections, careful attention is paid to physiology, morphology and embryology, and other subjects of biological interest. The illustrations are well selected, many being original, and interesting schemata of the life histories of parasites are included.

The present edition has been carefully revised and brought up to date.

Personal Hygiene and Physical Training for Women. By ANNA M. GALBRAITH, M.D. Philadelphia and London: W. B. Saunders Co. 1911. 12mo. Pp. 371.

THE fundamental physiological laws on which personal hygiene must be based are very fully dealt with in this work, as well as the practical detailed directions for proper development of the body and training of the physical powers by fresh air, baths, proper food and clothing, and gymnastic and other exercises. There are chapters on hydrotherapy, the care of the skin and its disorders, including wrinkles and pimples, the digestive system, with a classification of food stuffs, the respiratory and circulatory systems and the kidneys, and the physiology of the female pelvic organs, and the nervous system.

The author holds dress to be the fundamental cause of woman's physical deterioration, and considers physical training to be the key to health and beauty.

The anatomical and physiological portions of the work are sound, and the detailed directions as to dress, food, exercise, &c., will be most useful to ladies engaged in the cultivation of physical health in schools and colleges.

The Ship-Surgeon's Handbook. By A. Vavasour Elder, M.R.C.S., L.R.C.P. Second Edition. London: Baillière, Tindall & Cox. 1911. Cr. 8vo. Pp. xii + 387.

Some time ago we were asked by a young gentleman who had just passed his "Final" if we would use our influence to get him a ship. At the time there was a prospect of gratifying his wish, and on being asked was he ready to start at a short notice, he replied at least three weeks would be required, as he had no intention of undertaking a long sea voyage with a vermiform appendix in his abdomen. If by any chance the above work got into this tyro's hands he would, in the knowledge of the tremendous responsibility he was taking on his shoulders, firmly decline the position, even though his personal comfort was secured by the removal of this much abused diverticulum.

Yet there is no exaggeration in what the author states, and we fear too many of our profession, to use his own words, merely go to sea in order to travel at some one else's expense.

The author gives a piece of advice at the end of Chapter I. which, although true in the main, is open to an objection—*i.e.*, not "to stay at sea long." This all depends on a man's ambition—for the brilliant house-surgeon who hopes to attain to the staff of his hospital, for the practitioner who intends specialising, this would be fatal. But many of us are not so favoured by nature or opportunity, and live the even tenor of our way in a country practice, or perhaps in the poorer neighbourhoods of the great cities. Take a doctor in a East End of London practice, or an Irish rural dispensary, and what a contrast to the medical officer of, say, the Baltic or a "P. & O." Liner. The former's existence is degraded by his surroundings; he sees little else than his patients of the

lower order wtih their vices of treachery and meanness, their delight in bullying him when they can, and their squalid lives. The latter mixes in the best society ; he is associating with persons of note every voyage ; he has no household cares : he lives on the very fat of the land, and, if loyal to himself, he has the very best means at his disposal of gaining some lucrative post on shore, when so inclined, by the interest of the friends he has made in the saloon.

We commend a valuable hint given—to get in touch with the hospitals in each city he visits. There is much to be learned from the different forms of treatment, and many men in their prescriptions never go outside their own hospital formulæ all their lives.

It has always appeared to us that the older we grow the more the tremendous responsibilities attached to a ship-surgeon appear ; his care may extend to thousands of human beings cooped up for a long period subject to disease of contact and all sorts of accidents. A serious case occurs—he must act promptly, he has only himself to depend on. Unless there is another medical man on the ship, any help to be got from the crew is almost worthless, and yet we know doctors who of themselves would not perform the smallest surgical operation on shore, look forward to a holiday by taking charge of a ship. Verily, Providence protects fools and drunken men !

On the nursing question we join issue with Dr. Elder. The passenger traffic has so enormously increased, and *pari passu* the risks of accidents and disease, that on the larger passenger steamers qualified nurses should be carried. It would be sufficient, and at no extra cost to the company, if each stewardess, before engagement, were required to possess at least a "midwife's qualification." This is, we believe, carried out on some SS. Lines. The surgeon would then have skilled help always at hand, the stewardesses taking their turn to act as nurse should the emergency arise, during which period she would be temporarily transferred from the chief steward's to the medical department. We would not recommend the installation of a nurse who would act only in that capacity on a ship for many reasons, not the least

being the constant friction which would be bound to occur with the stewards' department.

In conclusion, we recommend this book warmly to the young doctor who thinks of spending some time at sea, since in its pages it puts him in possession of facts which it would take years of experience to discover.

Incompatibility and Some of its Lessons. By WALTER G. SMITH, M.D.; King's Professor of Materia Medica and Pharmacy, T.C.D.; Physician to Sir Patrick Dun's Hospital. Second Edition. London: Simpkin, Marshall & Co., Ltd. Dublin: Hanna & Neale. 1911.

DR. SMITH'S pamphlet on Incompatibility is probably well known to many of our readers. It first appeared as a series of papers in the pages of "The Practitioner," and was later issued in its present form. It has now deservedly reached a second edition, and in the minds of many of Dr. Smith's old pupils has attained to the dignity of a classic. We know of no book in which the subject is dealt with more scientifically and practically, and inasmuch as the writing of compatible prescriptions, prescriptions which, in the words of the writer, should combine elegance with usefulness and safety, is the physician's constant task, we strongly recommend the present *brochure* as an aid in the accomplishment of this duty. Incompatibility is divided into the two varieties of pharmaceutical and chemical, and each variety is separately dealt with, the latter variety naturally receiving most of the writer's attention. A very useful list of rules for solubility in water of the various salts is given on page 9, and might with much advantage be committed to memory. Chemical incompatibilities are grouped under the two headings of (1) Homogeneous, in which no visible change of form takes place, and (2) Heterogeneous, in which gas is evolved or a precipitate formed. Each heading is dealt with systematically, and numerous examples of the common mistakes that are likely to arise are given. A short appendix to the present edition deals with the changes that drugs are liable to undergo as a result of time and exposure.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—Sir Charles Ball, M.D., F.R.C.S.I.
General Secretary—J. A. Scott, M.D., F.R.C.S.I.

SECTION OF PATHOLOGY.

President—A. H. Benson, M.B., F.R.C.S.I.
Sectional Secretary—W. Boxwell, M.B., F.R.C.P.I.

Friday, February 24, 1911.

The President in the Chair.

Sarcoma of the Choroid.

The President showed the eye of a woman, aged fifty-four, which contained a mushroom-shaped leuco-sarcoma of the choroid. She had been blind in that eye for a considerable time, and had suffered from intense pain in the eye for some weeks previous to operation. The pain was due to secondary glaucoma. The specimen showed well the mushroom-shaped method of growth. The neoplasm started close to the disc, and had, no doubt, blocked the percolation through the spaces round the entrance of the optic nerve. The tumour had apparently not extended through the external coats of the eye, so that it was probable that the patient might not suffer from metastases.

Mr. H. C. Mooney showed a similar mushroom-shaped growth of the choroid. A spot could be seen in the external limiting membrane, where the tumour had burst through into the vitreous, forming its peculiar mushroom shape.

when relieved from the pressure of the tissues in which it originated.

In both specimens the retina was completely detached and pushed forward against the lens, thus inducing the high tension.

Congenital Cystic Kidney.

Mr. Gunn showed a specimen of congenital or polycystic kidney, and read a few notes on this rather rare condition, mentioning some of the theories which have been advanced in explanation of the cause of such renal tumours.

Dr. O'Kelly said Mr. Gunn had mentioned that, according to Virchow, cystic disease of the kidney was the result of fibrotic change, but that this change was usually absent when the kidneys were examined. In this connection two cases which recently came under his notice were of interest. In these the kidneys contained many large cysts, and the lesion of chronic interstitial nephritis was present. The cysts were much larger than those usually found in "granular" kidneys, but not so numerous as in cases of cystic disease. The difficulty, which he had not solved, was whether the kidneys were to be regarded as cystic kidneys with chronic interstitial nephritis or as granular kidneys with unusually large cysts. Both kidneys were involved in each case. There was no cystic change in the liver.

Dr. Boxwell was struck by the comparative rarity of cystic kidneys; judging from Mr. Gunn's statistics "one in seven hundred autopsies." Congenital cysts had been mentioned and inflammatory retention cysts. But there was a much commoner form, where the cysts were single or multiple, often very large, and thin-walled, but where there was no evidence of inflammation. These kidneys were continually turning up at autopsies. Were these in an early stage of the condition shown by Mr. Gunn? He had recently seen a very similar change in a sheep's kidney.

Professor A. H. White said he could not look upon this cyst-formation as a tumour growth at all. He thought it was due either to congenital malformation or to a combination of this with subsequent chronic inflammation and degeneration.

Mr. Gunn, in reply, said that perhaps he should have

mentioned that the kidney he had shown was taken from a woman about thirty-six years of age, and there was no albumen in the urine before operation. The second kidney had appeared to be normal to the touch. Two days after the operation the urine was apparently quite normal, and he thought interstitial nephritis was very rarely confined to one side, so that if the kidney which had been removed showed signs of inflammation the second kidney would not be secreting absolutely normal urine. Dr. Boxwell had asked him whether the large cysts one saw in kidneys were the same kind as those met with in the very earliest stage of cystic kidney. It was a multiple disease, and in some cases, where the patient had died, they had found a number of cysts scattered through the kidneys, one kidney being extensively diseased and the other only slightly. It was suggestive that so many cases occurred in women and between forty and sixty years of age, about the time when the menopause came on.

Chronic Endocarditis and Calcification, with some organs from the same case.

Dr. T. T. O'Farrell showed some organs in a case of chronic endocarditis and calcification. They belonged to a woman, aged forty-five years, who was admitted to St. Vincent's Hospital on the 24th of January, and died on the 27th of January. She was then suffering from rapid action of the heart, hæmoptysis, and extreme dyspnœa. Afterwards the pulse became stronger and more regular, but ultimately the heart gave way. There was no particular pain in the chest. No previous history could be obtained except that she had been in the Royal City of Dublin Hospital a few years ago under Dr. Moorhead's care. *Post-mortem* examination showed that the heart was particularly interesting. There was no pericarditis. The right side was a little dilated and hypertrophied, but showed no disease to speak of. There was some dilatation of the left side, but no evidence of "tabby-cat" striation. There were shortening and thickening of the chordæ tendineæ. Only the tip of the finger could be got into the valve. The opening at the base of the valve (the auriculo-ventricular ring) was quite calcified. With regard to the other organs there was a typical "nutmeg" liver and the sclerosed spleen of chronic heart

disease. The middle lobe of the lung was quite solid. The whole lobe being affected suggested pneumonia, but this was a hæmorrhagic infarct. If the gritty particles seen in the heart formed the pulmonary embolus they must have been very minute, and it was difficult to see how they reached the lung. There were a few small cysts in the kidney, but the organ was not particularly small.

Dr. Stokes said he was under the impression that a big spleen was the rule in these cases, and asked why it was that the spleen was so small.

Dr. T. G. Moorhead said the case was under his care in 1907, but he did not recollect the details now. His own experience was that a small spleen was comparatively rare in such conditions—a congested spleen was more common.

Dr. Boxwell referred to the remarkable degree of stenosis often found in these cases and to the chronicity of the disease. He had seen calcified valves which would scarcely admit the passage of an ordinary scalpel. As to the hæmorrhage in the lung, it had never occurred to him to look for the cause in the left side of the heart. It was either hæmorrhage pure and simple or an infarct caused by embolism of a branch of the pulmonary artery by a thrombus originating in the right auricle.

Dr. O'Farrell, in reply, said, with reference to the size of the spleen, that on account of this case being so chronic the stage of wasting had had time to develop. He agreed that in the early stage of heart disease the spleen was enlarged. The connective tissue increase was more marked in the spleen than any other organ, particularly in a case like this. The patient must have been ailing a long time. In the case of the woman whose condition he had described no murmur could be heard, but the heart was beating tumultuously.

Sarcoma of the Brain.

Mr. Arthur Ball described a case of brain tumour which was found *post-mortem* in a woman, aged thirty-six, who was brought in an unconscious condition to hospital on January 22nd, 1911. She was apparently unconscious when examined by the residents, and when one remarked to another that she had a squint, "Yes," said the patient,

"paralysis of the external rectus." She complained of a terrible pain in her head, and shortly afterwards became completely unconscious. The right rectus was paralysed, the right pupil was dilated. She became comatose, and died the following day. With the exception of the right eye no paralysis was present. The only history we could at first obtain was that she had been blind of the right eye for some time, and had suffered from violent headaches, and had been a patient at an eye hospital. She was in a situation as a servant up to the time of her death, and was taken suddenly ill at the house of a friend, and brought from there to hospital. Her previous history, obtained from the eye hospital, is interesting, showing the long duration of her symptoms:—"She first attended on the 29th of April, 1907, with paralysis of the right external rectus; no cause could be found. She was treated with sod. salicyl., but did not get better. In August, 1907, she had some neuralgia. In December, 1909, she lost the sight of the right eye, and had much pain in the right side of the face and head. The fundus was normal. Vision-motion of hand. Pupil widely dilated, no reaction to light. She has not been here since." The long duration of the symptoms, and the fact that the patient was able to work up to the time of her death, made the case a remarkable one.

Professor A. C. O'Sullivan gave a detailed description of the size and position of the tumour. It was of the size and shape of a hen's egg, and lay in the right temporal fossa. It had caused a deep depression in the tempora splenoidal lobe, but was quite unattached to it. It was firmly attached to the dura mater, and had evidently grown from it. It had eroded the temporal bone and projected for a short distance through the skull into the upper part of the pharynx. Microscopically the tumour presented different appearances in different parts. Some of it resembled cavernous tissue containing large spaces lined with endothelium and filled with blood. In other parts the endothelial cells had formed solid columns, and the intervening tissue was hyaline. In places there were small concentrically laminated bodies consisting of compressed cells, and showing various degrees of hyaline change. He regarded the growth as a hæmatangio-endothelioma.

SANITARY AND METEOROLOGICAL NOTES.

Vital Statistics.

For four weeks ending Saturday, May 20, 1911.

IRELAND.

The average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended May 20, 1911, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 16.1 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,163,596. The deaths registered in each of the four weeks ended Saturday, May 20, and during the whole of that period in the several districts, alphabetically arranged, correspond to the following annual rates per 1,000. In some cases, owing to deaths not having been registered within the week in which they occurred, the rates do not fairly represent the weekly mortality :—

Towns, &c.	Week ending				Average Rate for 4 weeks	Towns, &c.	Week ending				Average Rate for 4 weeks
	April 29	May 6	May 13	May 20			April 29	May 6	May 13	May 20	
22 Town Districts	20.8	18.2	17.8	16.1	18.2	Lisburn	18.2	22.7	4.5	18.2	15.9
Armagh	13.7	13.7	20.6	34.4	20.6	Londonderry	14.3	19.0	10.7	15.4	14.9
Ballymena	14.4	33.5	23.9	23.9	23.9	Lurgan	22.1	35.4	22.1	8.9	22.1
Belfast	20.9	14.3	15.7	16.1	16.8	Newry	37.8	21.0	33.6	12.6	26.2
Clonmel	25.6	20.5	10.3	20.5	19.2	Newtownards	11.4	11.4	11.4	5.7	10.0
Cork	24.0	23.3	20.5	17.8	21.4	Portadown	20.7	—	10.3	10.3	10.3
Drogheda	4.1	8.2	20.4	4.1	9.2	Queenstown	6.6	19.8	19.8	26.4	18.2
Dublin (Reg. Area)	22.4	21.3	20.8	15.5	20.0	Sligo	9.6	33.6	9.6	14.4	16.8
Dundalk	35.9	12.0	35.9	16.0	24.9	Tralee	15.9	26.4	15.9	15.9	18.5
Galway	35.0	11.7	11.7	7.8	16.6	Waterford	13.6	17.5	11.7	11.7	13.6
Kilkenny	14.7	19.7	29.5	14.7	19.7	Wexford	28.0	14.0	14.0	23.3	19.8
Limerick	10.9	13.7	10.9	26.0	15.4						

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 22 districts during the week ended Saturday, May 20, 1911, were equal to an annual rate of 1.1 per 1,000, the rates varying from 0.0 in sixteen of the districts to 5.3 in Tralee—the 3 deaths from all causes for that district including one from diarrhœa. Among the 123 deaths from all causes for Belfast are one from whooping-cough and 4 from diarrhœa and *enteritis* of children under 2 years of age. Of the 26 deaths from all causes registered in Cork 2 are from whooping-cough, and 2 deaths from the same disease are included in the 13 deaths from Londonderry.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock, and Kingstown. The population of this area is 407,057, that of the City being 313,526, Rathmines 37,528, Pembroke 29,368, Blackrock 9,013, and Kingstown 17,622.

In the Dublin Registration Area the births registered during the week ended Saturday, May 20, 1911, amounted to 226—115 boys and 111 girls; and the deaths to 129—68 males and 61 females.

DEATHS.

Omitting the deaths (numbering 8) of persons admitted into public institutions from localities outside the Area, the annual rate of mortality was 15.5 per 1,000. During the twenty weeks ending with Saturday, May 20, the death-rate so corrected averaged 22.6, and was 2.8 below the mean rate for the corresponding portions of the ten years 1901–1910.

The total deaths registered, numbering 129, represent an annual rate of 16.5 per 1,000. The annual death-rate for the past twenty weeks was 23.9 per 1,000, and the average annual rate for the corresponding period of the past ten years was 26.5 per 1,000 of the mean population for all deaths registered.

Included in the total deaths from all causes were 4 deaths from measles, 4 from whooping-cough, one death from enteric fever, one death from diphtheria, 3 from diarrhœa and enteritis of children under 2 years of age, and one death from influenza.

In each of the three weeks preceding, deaths from measles were 5, 8, and 17 ; deaths from whooping-cough were 2, 3, and 2 ; deaths from enteric fever were 0, 1, and 1 ; deaths from diphtheria were 1, 2, and 3 ; deaths from diarrhœa and enteritis of children under 2 years of age were 4, 4, and 1 ; and deaths from influenza were 0, 3, and 2.

Of 31 deaths from tuberculous disease, 25 were caused by pulmonary tuberculosis, 3 by tubercular meningitis, one by abdominal tuberculosis, one death by tuberculosis of the vertebral column, and one by disseminated tuberculosis. Deaths from all forms of tuberculosis in the three preceding weeks were 32, 27, and 23 respectively.

There were 7 deaths from broncho-pneumonia and 5 deaths from *pneumonia* (type not distinguished).

The deaths of 6 persons were due to cancer.

Of 9 deaths from diseases of the brain and nervous system, one, that of an infant. was attributed to *convulsions*, and 3 deaths were from meningitis.

Organic diseases of the heart accounted for the deaths of 6 persons. There were 14 deaths from bronchitis.

The deaths of 5 infants were assigned to premature birth or congenital debility.

There was one accidental death by burning caused by clothes catching fire.

In one instance the cause of death was "uncertified," there having been no medical attendant during the last illness.

Forty of the persons whose deaths were registered during the week were under 5 years of age (23 being infants under one year, of whom 8 were under one month old), and 17 were aged 65 years and upwards, including 14 persons aged 70 years and upwards. Among the latter were 7 aged 75 years and upwards.

The Registrar-General points out that the names of the cause of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," and the "Tuberculosis Prevention (Ireland) Act, 1908," as set forth in the following table, have been furnished by Sir Charles

A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; by Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; by Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; by the Executive Sanitary Officer for Kingstown Urban District; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended May 20, 1911, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Small-pox	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Pyrexia (origin uncertain) *a*	Enteric or Typhoid Fever	Erysipelas	Puerperal Fever	Whooping-cough	Cerebro-spinal Fever	Tuberculur Phthisis (*Phthisis*)	Total
City of Dublin	Apr. 29	–	*	*	8	–	–	22	–	2	10	5	–	*	–	13	60
	May 6	–	*	*	16	–	–	8	–	1	3	2	–	*	–	15	44
	May 13		*	*	7	1	–	16	–	1	8	6	–	*	–	13	52
	May 20	–	*	*	13	4	–	18	–		6	7	–	*	–	13	61
Rathmines and Rathgar Urban District	Apr. 29	–	*	*	2	–	–	1	–	–	–	1	–	*	*	*	4
	May 6	–	*	*	2	–	–	2	–	–	2	–	–	*	*	*	6
	May 13	–	*	*	1	–	–	2	–	–	–	1	–	*	*	*	4
	May 20	–	*	*		–	–	1	–	–	1	–	–	*	*	*	2
Pembroke Urban District	Apr. 29	–	26	–	1	–	–	–	–	–	–	–	–	2	–	–	29
	May 6	–	16	–	–	–	–	–	–	–	1	–	–	1	–	–	18
	May 13	–	14	–	1	–	–	–	–	–	–	–	–	2	–	–	17
	May 20	–	12	–	–	–	–	–	–	–	–	–	–	4	–	–	16
Blackrock Urban District	Apr. 29	–	*	*	1	–	–	–	–	–	–	–	–	*	–	*	1
	May 6	–	*	*	1	–	–	–	–	–	–	1	–	*	–	*	2
	May 13	–	*	*	–	–	–	–	–	–	–	–	–	*	–	*	–
	May 20	–	*	*	–	–	–	–	–	–	–	–	–	*	–	*	–
Kingstown Urban District	Apr. 29	–	*	*	–	–	–	–	–	–	–	–	–	*	–	–	–
	May 6	–	*	*	–	–	–	–	–	–	–	–	–	*	–	–	–
	May 13	–	*	*	–	–	–	–	–	–	–	–	–	*	–	–	–
	May 20	–	*	*	–	–	–	–	–	–	–	–	–	*	–	–	–
City of Belfast	Apr. 29	–	*	*	9	–	–	2	–		7	–	*	–	12	30
	May 6	–	*	*	13	–	–	4	–	–	1	–	*	–	17	35
	May 13	–	*	*	9	–	–	3	–		1	1	*	–	10	26
	May 20	–	*	*	7	–	–	6	–	–	1	–	*	1*b*	24	39

a Continued Fever. *b* Returned as cerebro-spinal meningitis.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended May 20, 1911, 22 cases of measles were admitted to hospital, 37 cases were discharged, and 88 cases remained under treatment at the close of the week. In the 3 pre-

ceding weeks such cases had been 81, 89, and 103, respectively.

Fourteen cases of scarlet fever were admitted to hospital, 17 were discharged, and 76 cases remained under treatment at the close of the week, exclusive of 22 convalescents from the disease who were still under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the 3 preceding weeks the cases in hospital were 86, 78, and 79, respectively.

Four cases of typhus were admitted to hospital during the week, and 7 cases remained under treatment at its close.

Eighteen cases of diphtheria were admitted to hospital, 9 were discharged, and there was one death. The cases in hospital, which at the close of the 3 preceding weeks numbered 63, 61, and 57, respectively, were 65 at the close of the week.

Six cases of enteric fever were admitted to hospital, 9 were discharged, and 47 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the 3 preceding weeks being 54, 48, and 50.

In addition to the above-named diseases, 8 cases of pneumonia were admitted to hospital, 10 were discharged, and 32 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, May 20, in 77 large English towns, including London (in which the rate was 10.9), was equal to an average annual death-rate of 12.4 per 1,000 persons living. The average rate for 8 principal towns of Scotland was 15.8 per 1,000, the rate for Glasgow being 15.2, and for Edinburgh 18.7.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended May 20. From this report it appears that of a total of 38 cases notified, 16 were of phthisis, 11 of scarlet fever, 7 of diphtheria, 2 of erysipelas, one of puerperal fever, and one of enteric fever. Among the 349 cases of infectious diseases in hospital at the close of the week were 115 cases of scarlet fever, 61 of phthisis, 52 of diphtheria, 43 of measles, 54 of whooping-cough, 8 of erysipelas, 9 of chicken-pox, 3 of enteric fever, and 2 of puerperal fever.

Meteorology.

Abstract of Observations made in the City of Dublin, Lat. 53° 20′ N., Long. 6° 15′ W., for the Month of May, 1911.

Mean Height of Barometer,	29.972 inches.
Maximal Height of Barometer (28th, at 9 a.m.),	30.307 ,,
Minimal Height of Barometer (3rd, at 9 a.m.),	29.330 ,,
Mean Dry-bulb Temperature	54.8°.
Mean Wet-bulb Temperature,	51.4°.
Mean Dew-point Temperature,	48.3°.
Mean Elastic Force (Tension) of Aqueous Vapour,	.339 inch.
Mean Humidity,	79.4 per cent.
Highest Temperature in Shade (on 24th),	69.8°.
Lowest Temperature in Shade (on 4th),	41.1°.
Lowest Temperature on Grass (Radiation) (21st),	38.8°.
Mean Amount of Cloud,	50.5 per cent.
Rainfall (on 10 days),	1.286 inches.
Greatest Daily Rainfall (on 13th),	.490 inch.
General Directions of Wind,	N.E., W.

Remarks.

Opening with a broken spell of fresh to squally south-westerly winds, showers, and low temperatures, this month proved one of the finest, warmest and brightest Mays of the past half-century. In the week ended Saturday, the 27th, the sunshine record was 61.3 hours at the Ordnance Survey Office, Phœnix Park, 59.7 hours at Trinity College, and 59.0 hours at the Royal Botanic Gardens, Glasnevin. Only in 1868 and in 1893 was the mean temperature (55.3°) exceeded—in 1868, it was 55.8°, in 1893, 56.3°. In 1908 it was 55.2°. Large and deep cyclonic depressions were centred in the Icelandic region both at the beginning of the month and from the 22nd to the 25th, but only their fringe and the secondaries attached thereto affected the British Islands. At Reikjavik, the Capital of Iceland, the barometer stood as low as 28.61 inches at 7 a.m. (G. M. T.) of the 23rd. But, speaking generally, the distribution of atmospheric pressure was chiefly anticyclonic in the British Isles—hence the dry, warm weather of the latter half of the month. In Dublin two-thirds of the rainfall for the whole month occurred on the 3rd and 13th. On the former occasion the wind veered from S.W. to W. at 11 a.m., with strong squalls and torrents of rain mingled with hail. On the night of the 13th a severe thunderstorm burst over Dublin, accompanied by a downpour of rain. From the 15th onwards

only .003 inch of rain fell in this city. Violent thunderstorms occurred in England about the 25th, and on the 30th and 31st. Polar winds and sharp cold had been experienced in that country from the 18th to the 21st inclusive, and a period of summer heat followed hard upon the chilly spell. These changes apparently upset the electric equilibrium of the atmosphere. In the violent thunderstorm of the 31st, the rainfall at Epsom was 2.86 inches, of which 2.44 inches fell between 5 20 p.m. and 6 10 p.m. In the same storm 1 inch was measured at Greenwich Observatory.

In Dublin the arithmetical mean temperature (55.3°) was 3.1° above the average (52.2°). The mean dry-bulb readings at 9 a.m. and 9 p.m. were 54.8°. In the forty-seven years ending with 1911, May was coldest in 1869 (M. T. = 48.2°), and warmest in 1893 (M. T. = 56.7°). In 1910 the M. T. was 51.9°.

The mean height of the barometer was 29.972 inches, or 0.017 inch below the corrected average value for May—namely, 29.989 inches. The mercury rose to 30.307 inches at 9 a.m. of the 28th, and fell to 29.330 inches at 9 a.m. of the 3rd. The observed range of atmospheric pressure was, therefore, 0.977 inch.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 54.8°, or 7.8° above the value for April, 1911—47.0°. Using the formula *Mean Temp.* = *Min.* + (*Max.* — *Min.* × .47), the value is 54.9°, or 3.1° above the average mean temperature for May, calculated in the same way, in the thirty-five years, 1871–1905, inclusive (51.8°). The arithmetical mean of the maximal and minimal readings was 55.3°, compared with a thirty-five years' average of 52.2°. On the 24th the thermometer in the screen rose to 69.8°—wind, S.; on the 4th the temperature fell to 41.1°—wind, W. The minimum on the grass was 38.8° on the 21st.

The rainfall amounted to 1.286 inches, distributed over 10 days. The average rainfall for May in the thirty-five years, 1871–1905, inclusive, was 1.970 inches, and the average number of rain-days was 15. The rainfall and rain-days were, therefore, considerably below the average. In 1886 the rainfall in May was very large—5.472 inches on 21 days; in 1869, also, 5.414 inches fell on 19 days. On the other hand, in 1895, only .177 inch was measured on but 3 days. In 1896 the fall was only .190 inch on 7 days. In 1910, 2.550 inches fell on 21 days.

A solar halo appeared on the 11th. High winds were noted on

3 days, and attained the force of a gale on the 3rd. Hail fell on the 2nd, 3rd and 13th. A brief thunderstorm occurred on the 11th, and a severe thunderstorm on the night of the 13th. There were fogs on the 8th and 15th.

The mean minimal temperature on the grass was 46.2°, compared with 42.0° in 1910, 41.9° in 1909, 45.2° in 1908, 41.6° in 1907, 41.9° in 1906, 42.5° in 1905, 42.6° in 1904, 44.3° in 1903, 40.3° in 1902, 41.7° in 1901, and 37.6° in 1894. The maximum never fell short of 50°. The absolute maximum was 69.8° on the 24th.

The rainfall in Dublin during the five months ended May 31st amounted to 5.986 inches on 69 days, compared with 12.421 inches on 92 days in 1910, 10.098 inches on 75 days in 1909, 10.078 inches on 95 days in 1908, 9.499 inches on 81 days in 1907, 11.592 inches on 97 days in 1906, 9.026 inches on 81 days in 1905, 11.741 inches on 92 days in 1904, 12.560 inches on 95 days in 1903, 9.973 inches on 81 days in 1902, 7.724 inches on 67 days in 1901, 5.971 inches on 70 days in 1896, and a thirty-five years' average of 10.040 inches on 81 days.

At the Normal Climatological Station in Trinity College, Dublin, the observer, Mr. C. D. Clark, returns the mean height of the barometer as 29.966 inches, the highest reading observed being 30.291 inches at 9 a.m. of the 20th, the lowest, 29.334 inches at 9 a.m. of the 3rd. The arithmetical mean temperature was 54.5°, the mean dry-bulb reading at 9 a.m. and 9 p.m. being 54.8°. Rain fell on 8 days to the amount of 1.043 inches, .386 inch being measured on the 13th. The number of hours of bright sunshine registered by the Campbell-Stokes sunshine recorder was 214.0, giving a daily average of 6.9 hours. The corresponding figures for May, 1904, were 192.5 hours and 6.2 hours; for 1905, 215.7 hours and 7.0 hours; for 1906, 132.5 hours and 4.3 hours; for 1907, 173.0 hours and 5.6 hours; for 1908, 193.9 hours and 6.3 hours; for 1909, 231.5 hours and 7.5 hours; and for 1910, 175.5 and 5.7 hours, respectively. The mean earth-temperature at 9 a.m. was 54.6° at a depth of one foot below the surface, 51.0° at 4 feet. The corresponding values for 1910 were 54.7° and 49.3°, and for 1909, 52.3° and 50.0°. The lowest temperature on the grass (terrestrial radiation) was 29.3° on the 21st. The highest temperature in the shade was 70.0° on the 24th; the lowest was 40.7° on the 21st.

Captain Edward Taylor, D.L., returns the rainfall at Ardgillan,

Balbriggan, Co. Dublin, as having been 1.11 inches on 11 days; the largest fall in one day was .30 inch on the 3rd. The rainfall was .86 inch below the average, the rain-days were 3 in defect. Since January 1, 7.88 inches of rain have fallen at that station on 70 days, this measurement being 2.40 inches below the average and the rain-days being 9 in defect. The shade temperature ranged from 37.7° on the 4th to 64.9° on the 22nd, 23rd, and 30th. The mean temperature was 52.4°, or 2.3° above the average.

At Coolagad, Greystones, Co. Wicklow, the rainfall measured by Dr. J. H. Armstrong was .94 inch on 8 days, .29 inch falling on the 1st, and again on the 3rd. The total fall since January 1st, 1911, equals 7.01 inches on 64 days.

Dr. W. Stewart Ross measured .86 inch of rain on 8 days at Clonsilla, Greystones, Co. Wicklow. The heaviest fall in 24 hours was .29 inch on the 3rd. The mean temperature was 53.5°—highest being 73° on the 25th, lowest 40° on the 3rd. The mean maximum was 60.2°, the mean minimum was 46.8°.

Dr. Arthur S. Goff returns the rainfall at Lynton, Dundrum, Co. Dublin, at 1.42 inches on 12 days. The greatest daily measurement was .50 inch on the 13th, when a thunderstorm occurred. The temperature in the shade ranged from 40° on the 21st to 72° on the 24th. The mean temperature of the month was 55.6°, compared with 52.4° in 1910, 53.6° in 1909, 56.2° in 1908, 51.1° in 1907, 51.8° in 1906, 54.5° in 1905, 53.3° in 1904, 53.1° in 1903, 50.5° in 1902, and 52.6° in 1901.

At Manor Mill Lodge, Dundrum, Co. Dublin, Mr. George B. Edmondson measured 1.29 inches of rain on 11 days, the greatest fall in 24 hours being .48 inch on the 13th. The mean temperature was 57.0°, the extremes being—highest, 78° on the 31st; lowest, 40.0° on the 21st.

At the Ordnance Survey Office, Phœnix Park, Dublin, rain fell on 11 days to the amount of 1.179 inches, the largest measurement in 24 hours being .425 inch on the 3rd. The total amount of sunshine was 235.3 hours, the most in one day being 14.2 hours on the 27th, and again on the 29th.

Mrs. Olive F. Symes reports that the rainfall at Druid Lodge, Killiney, Co. Dublin, was .49 inch on 7 days, .17 inch being measured on the 13th. The average rainfall in May at Killiney in the 24 years, 1885–1908, inclusive, was 2.136 inches on 13.8 days.

At Cheeverstown Convalescent Home for Little Children of the Poor, Clondalkin, Co. Dublin, Miss C. Violet Kirkpatrick recorded

a rainfall of 1.70 inches on 10 days, the maximal falls in 24 hours being .51 inch on the 15th and .49 inch on the 3rd.

Dr. John T. Crowe reports that the rainfall at the Royal National Hospital for Consumption, Newcastle, Co. Wicklow, was 1.23 inches on 7 days, the greatest fall in 24 hours being .43 inch on the 2nd. The screened thermometers ranged from 39.0° on the 21st to 67.0° on the 29th. The mean temperature at 9 a.m. and 9 p.m. was 52.7°.

Dr. C. Joynt, F.R.C.P.I., returns the rainfall at 21 Leeson Park, Dublin, at 1.505 inches on 9 days, .680 inch being measured on the 13th and .375 inch on the 3rd.

Mr. T. Bateman returns the rainfall at The Green, Malahine, Co. Dublin, at 1.025 inches on 10 days. The greatest rainfall in 24 hours was .195 inch on the 1st. The extremes of temperature in the shade were—highest, 68.5° on the 24th ; lowest, 38.0° on the 20th. The mean temperature was 52.8°

Mr. W. Miller registered 1.82 inches of rain at Cork on 11 days. The greatest fall in 24 hours was .63 inch on the 1st. The rainfall was 0.46 inch in defect of the average for May. The rainfall of the first five months of 1911 was 9.89 inches on 71 days, or 5.06 inches less than the average. The rain-days also were 10 below the average.

The Rev. Arthur Wilson, M.A., writing from Dunmanway Rectory, Co. Cork, states that 5.34 inches of rain fell there on 14 days, 1.15 inches being measured on the 1st and 1.10 inches on the 2nd. Other heavy falls were .81 inch on the 13th and .74 inch on the 14th, chiefly in thunderstorms. At Dunmanway May was a warm month with very heavy rain on some days and nights, and a succession of thunderstorms for 5 days from midnight on the 10th to 5 p.m. on Sunday, the 14th. Each afternoon for 4 days there were thunder and lightning. On Saturday, the 13th, .75 inch of rain fell in 40 minutes, and on Sunday, the 14th, .70 inch in the same time. On the evening of Friday the 12th the lightning struck a field at Kilronan and left a mark like a huge asterisk. On Sunday, the 14th, there was a curious cloud, in shape like a long finger, pointing to the earth just before the thunder.

The rainfall recorded at Derreen, Kenmare, Co. Kerry, by Mr. W. Holbrow, amounted to 4.66 inches on 17 days. The heaviest fall in 24 hours was 1.33 inches on the 1st. The weather at Derreen was stormy from the 1st to the 4th. Thunder occurred on the 10th, 11th and 12th. It was very fine from the 25th to the end of the month.

THE GENERAL MEDICAL COUNCIL AND THE NATIONAL INSURANCE BILL.

The following Report of the National Insurance Bill Committee was adopted unanimously by the Council on Monday, May 29, 1911 :—

Members.

THE PRESIDENT, Chairman.

Dr. Norman Moore.	Sir David McVail.
Dr. Saundby.	Dr. Langley Browne.
Mr. Hodsdon.	Dr. Latimer.
Sir Charles Ball.	Dr. Norman Walker.
Sir Arthur Chance.	Dr. Kidd.

Sir Francis Champneys.

The Committee, which has held three meetings during the present Session, begs leave to report to the Council as follows :—

The Committee has considered the *National Insurance Bill*, now before Parliament, in so far as its proposals relate to the provision of "medical benefit" for a very large proportion of the population.

The Council, in the exercise of its statutory functions, has necessarily become familiar with the conditions under which medical practice has hitherto been carried on in this country. Having regard to these conditions, it has in the public interest endeavoured, both by educational and by disciplinary methods, "to secure the maintenance of such standard of proficiency" as shall sufficiently guarantee, on the part of registered practitioners, "the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery and midwifery" (*Medical Act*, 1886).

The Council cannot fail to recognise that under the organised system proposed in the Bill, the existing conditions will be profoundly altered. The alterations will affect the relations of the majority of the members of the profession to the State and to the public. The manner in which they conduct their practice will in important respects be controlled by new authorities, which need not possess any professional character or experience, and which are not restrained from imposing conditions that are

inconsistent with professional efficiency and freedom. The voluntary hospitals and other charitable institutions, which are now largely supported by the contributions of both employers and employed, have hitherto afforded those opportunities for clinical study that are indispensable for efficient medical education. There is danger that, under the new conditions, the resources of these institutions will be diminished and their usefulness for this purpose impaired. Changes, whose full effect it is impossible to forecast, will take place in the sanitary and preventive departments of Public Health administration. As a result of these and other consequences of the legislation proposed, it may well happen that the prospects and attractions of Medicine as a professional career will be so far depreciated, that the numbers who enter upon it will no longer be sufficient for the necessities of the country. Already the steady decline in the number annually admitted to the *Medical Register*, which has fallen from an average of 1,455 during the period 1891–95 to an average of 1,117 during the period 1906–10, gives cause for some misgiving. Any considerable reduction below the present rate of supply would be of serious import to the public.

For these reasons, which specially concern the General Council of Medical Education and Registration of the United Kingdom, the Committee think it highly expedient that steps should be taken to impress upon the Government the necessity of introducing into the Bill such amendments and additions as will safeguard the important interests in question.

In particular, the Committee desire the support of the Council in making representations to the following effect :—

(1) That (*a*) the Insurance Commission,
(*b*) the Advisory Committee,
(*c*) every Local Health Committee,
should include members who are duly qualified medical practitioners.

(2) That " medical benefit " and " maternity benefit " should be administered by the Local Health Committees, and not by " approved societies."

(3) That in respect of the administration of " medical benefit," the " arrangements with duly qualified medical practitioners " made by the Local Health Committees should be such as to admit of free choice of the medical practitioner on the part of the insured person : and that in respect of the administration

of "maternity benefit," the like free choice of the medical practitioner or midwife on the part of the person receiving "maternity benefit" should be admitted.

(4) That in respect of the grant of subscriptions and donations to hospitals and other charitable institutions, contemplated in Clause 17 of the Bill, the governing conditions should be assimilated to those set forth in Clause 15 (1) with regard to the administration of "sanatorium benefit."

(5) That in respect of the provision to be made for "the supply of proper and sufficient drugs and medicines" under Clause 14 (2), the supply of proper surgical dressings and appliances should be included; and further, that steps should be taken to ensure that the drugs and medicines are of the standard required by the *British Pharmacopœia*, and that the dispensing of prescriptions is carried out by qualified persons.

(6) That "medical benefit" should include provision for consultations and for operations when these are necessary.

(7) That, in the case of an insured woman, it should be made clear that "sickness benefit" accrues in addition to "maternity benefit"; and further, that in cases attended by a midwife the Local Health Committee is empowered to pay for the attendance of a medical practitioner, should such attendance be called for by the midwife in accordance with the rules governing her practice.

(8) That in Clause 59 (7), applicable to Ireland, it should be made clear that "deposit contributors" are not limited in their choice of medical practitioners to the Medical Officers of Health for dispensary districts.

Recommendation.

The Committee accordingly recommends—

"That the Council instruct the Committee to press upon the Government the importance of amending the *National Insurance Bill* in the sense of the suggestions contained in this Report, and to make representations on such other matters relevant thereto as may arise while the Bill is under the consideration of Parliament."

DONALD MACALISTER,
Chairman.

May 27, 1911.

MEMORANDUM.

June 17, 1911.

At the request of the National Insurance Bill Committee, the President sought an interview with the Chancellor of the Exchequer, for the purpose of laying before him the Resolutions of the Council. This was granted on Tuesday, May 30, 1911, the day following the second reading of the Bill in the House of Commons. The President explained the Council's views on the subject, and with most of these the Chancellor expressed his personal agreement. He promised to forward a written reply when he had fully considered the Council's Resolutions, and desired that the reply might be communicated to the Press forthwith for general information. The following reply has now been received and published. The President will be glad to have the comments of members of the Council, in view of an early meeting of the Committee.

TREASURY CHAMBERS,
WHITEHALL, S.W.,
June 13, 1911.

DEAR SIR DONALD MACALISTER.—I am sending you as I promised a considered reply to the various points and recommendations made in the report of the National Insurance Bill Committee which you left with me.

1. (*a*) The constitution of the Insurance Commission will, of course, be a matter of great importance, but I may say that it is my present intention that a doctor should have a seat upon it.

(*b*) I have always intended to put doctors upon the Advisory Committee.

(*c*) The Bill provides that doctors should be members of the Local Health Committees.

2. The Bill contains provisions for the transfer of medical attendance to the Local Health Committees. You will find these provisions in Clause 14 (3), (4), and (5), and you will see that it is to the advantage of Societies to make arrangements for the transfer of medical attendance under the Clause, for in the case of a transfer being effected, any excess in the cost of providing medical attendance may be paid by the Treasury and

the County or Borough Council, if sanctioned by them as reasonable and proper.

At this very early stage of the discussion as to the medical arrangements under the Bill, and having regard to the existence of a great number of vested interests in contract practice, I do not think that it is for the moment possible to propose that Societies should be *compelled* to hand over medical attendance to Local Health Committees, but it is for the medical profession and the Societies to come to some agreement which will make this immediately possible.

I entirely agree with the report of your Committee in considering it desirable.

The transfer of the maternity benefit to the same Committees is a matter which I must consider carefully, and I am bound to ascertain how such a transfer would be regarded by the Societies who represent members paying contributions under the Bill and entitled to the benefit.

3. It will be possible under the Bill for Local Health Committees to make arrangements such as to admit of the "free choice of a doctor" by the person insured. There must, however, be some limit on this freedom of choice, as the insured person cannot be allowed to change his doctor every month or every three months. Moreover, there must be some method of securing a panel of doctors which would prevent work being done by members of the profession who had shown themselves unfit for the performance of what would become a very responsible public duty.

4. It is not quite clear what is meant by this recommendation. The conditions in Clause 15 for sanatorium treatment make the approval of the Local Government Board necessary for the sanatoria to which the payments for treatment are made from the Insurance Fund. It is contemplated that this provision will carry with it a certain amount of inspection and control. I am not sure if your Committee fully realised this, and I confess that I should have hesitated to propose that public inspection and control should be extended to the voluntary hospitals which receive money from the approved Societies.

5. I agree that it will be necessary to include in the Bill the provision that prescriptions should be carried out by duly qualified persons, but it would be difficult to prescribe by statute the amount of surgical dressings and appliances which should be supplied under a Government scheme, and this question is pre-eminently

one which should be left to regulations to be framed by the Insurance Commissioners. In framing regulations the Insurance Commissioners will have the help of the Advisory Committee and the doctors who are represented upon it.

6. It is not proposed to make provisions in the Bill for institutional treatment and operations, but it is the intention of the Bill to supply as good service in the way of domiciliary treatment as may be found to be financially possible under the National Insurance.

7. Sickness benefit cannot be given to an insured woman as well as maternity benefit. You will find that this is precluded by Clause 8, Sub-section (6), of the Bill. Sickness benefit in times of confinement is not covered by an ordinary sick insurance, and the cost of providing it in these cases is an additional cost. If further money is to be paid in these cases it can only be done at the price of diminishing other benefits. The Bill leaves the distribution of the 30s. to regulations which will be drawn up after consulting the Advisory Committee appointed by the Bill, and I shall be very glad to consider the suggestions which you have made when the regulations come to be framed.

8. I shall consider the suggestion which you make that Deposit Contributors in Ireland should not be limited in their choice of medical practitioners.

Yours very truly,

D. LLOYD GEORGE.

Principal Sir Donald MacAlister, K.C.B.

LITERARY NOTE.

Mr. and Mrs. Sidney Webb's book on "The Prevention of Destitution," which will be published by Messrs. Longmans shortly after the Coronation, includes an elaborate examination of the experience of the German Government and of our own Friendly Societies, of Social Insurance generally, and Mr. Lloyd George's Bill in particular. The Government Bill is made the subject of faithful though friendly criticism, from the standpoint of expense, adverse effects on national character and unthrifty distribution of benefits; and some suggestions are made for its amendment, in the light of the little-known experience of the German Government.

THE NATIONAL INSURANCE BILL AND THE GENERAL PRACTITIONER OF MEDICINE.

Dear Sir,—As a general practitioner of Medicine of some fifteen years standing may I express my opinion of the medical aspect of the National Insurance Bill and how it will affect the general practitioner and the public.

I was qualified out of Dublin University in 1895, after four years' hard work and considerable expense to my parent. I spent some four years doing assistancy work in the North of England, and there thoroughly learned the "Club System," only to be disgusted with it.

In 1899, with £80 in my pocket, I started practice on my own account in a suburb of Dublin, and I made a resolution that even if my last penny was gone, I would never take a "Club" patient of my own. This resolution I have kept, and have not now, with the exception of the Royal Irish Constabulary, who pay 2s. per month per man, a single "Club" patient.

Now, what has been the consequence?—(1) I make on an average £600 a year. (2) I can refuse or accept any patient who comes to me. (3) I can go away for a holiday, and unless I have urgent cases at the time need leave no one in my practice; otherwise I have to pay four guineas a week to my *locum tenens*. (4) My fees are as follows:—Midwifery, from £5 to £3, according to the nature of the case; a few poorer patients at two guineas. Visiting and consultation fees from 6s. 8d. to 5s. Very poor people, servant girls, labourers, &c., I see at their own homes occasionally and on certain nights at my house for 2s. 6d. I never supply medicine except as an act of charity. Of course, like all doctors, I have my charity list—people whom I see for "God bless you, doctor"; and I have never yet, on the score of poverty, refused a sick call. I make few bad debts—probably £20 per annum at the outside. My patients, at least as far as I can judge, never grumble at my fees, and if they did, and I considered them worthy, we could arrange matters mutually, a practice common with all doctors. (5) I can lay by a little each year "against a rainy day" and incapacity, which, in my experience, comes sooner to us doctors than to other folk. (6) Probably more than one-fifth of my patients are subscribers

to medical clubs, but think so little of their cheap services that they come to me and pay me a full fee.

Now, if this Bill passes, where shall I stand, and what becomes of my twelve years' labour ? Probably more than one-fourth of my patients have less than £160 a year (and very few have above £300), out of whom, on an average, I make from £2 to £5 annually—a sum which they pay ungrudgingly. They know my fees and their own income, and they do not trouble me unless there is real necessity. If I accept the Bill, they will come to me with the least pain or ache, and I either must attend them at the capitation fee of 6s. per annum or they will go to some doctor who will. In either case I am the loser. My labour will be lost and my practice gone, and I must start life again at forty years of age, having no other source of income or expectations.

(7) Again, people will not value my services much ; it will not be charity or even kindness on my part ; they will contribute towards it, and will consider they have a right to my services (and remember from a doctor people always expect his best, no matter how little or how much they pay for it). Nowadays, in my experience, everything is valued on a monetary basis. The cheap is bad, and not to be desired ; the dear is good, and to be sought after. And it is we alone who are to become the "cheap Jacks." The Veterinary Surgeon, the solicitor, even the variety stage artist and the cat's meat man, can still demand his full pay, or else refuse to part with his advice or goods. Why, I ask, are we singled out ? What grudge has Mr. Lloyd George against me and my kind that he must bring us to financial ruin or a life of absolute slavery ? (8) We are to be the cheap Jacks and slaves, or practically slaves on a pittance, and I would like to know if our expenses are to lessen with our dwindling incomes. Will Mr. Lloyd George let us off our Income Tax ? Will he lessen the price of hay or petrol for us ?

At present the actual expenses alone of my practice run away with half my income. If this Bill passes I must give up my two horses (kept and used solely for professional purposes), dismiss my coachman, who has £1 5s. a week and a house, and whose wages I raise yearly.

This Spring I have spent so far £20 on new books and instruments, but in the future (as planned by Mr. Lloyd George) I must give all this up. Give up my Medical Magazines and new books, and degenerate accordingly ; and so must all my pro-

fessional brethren. For our present position we alone are to blame! Why do doctors take clubs at all? Are there not the hospitals, the dispensaries, and poor law relief for those who cannot pay us? Why not enlarge these means and pay the doctors attached to them an adequate sum, and see that they keep up with the advance of medical thought and movement? Where is the need of prostituting and rendering destitute a profession which for charitable deeds has no equal? As it is, the public have not too much respect for our profession, and when we are hired servants at 6s. per annum will they have any at all? And it is the unfortunate general practitioner who will feel it most. How many hours a day are we to work for our 6s.? At the present time in the rush of winter I work from 9 a.m. until midnight, not counting night work at all. How many visits shall I now have to pay each patient for his 6s.? Imagine 365 visits to one patient for such a fee—1,000 patients at this rate and I make £300 per annum! Do you think I shall be able to give much time or thought to each case at this rate? Is it to be imagined for one moment that if I would do it I could give my best? No, it will be a rush in and rush out, and bundle each patient off to hospital as soon as possible. In any case we will be a degraded profession, and it is the public who will suffer most. "Philanthrophy" and "charity"—two beautiful soul-stirring words—but they will not pay a coachman or feed two horses and myself.

Are my brethren in England so wealthy a class or have they fallen so low that every doctor of Mr. Lloyd George's acquaintance is able or contented to do his work at the lowest wage yet offered to human being?

Now, it is we, general practitioners, who must oppose this Bill tooth and nail. To us it spells absolute financial ruin, or a life of over-work, premature decay, and pauperism. We need not expect much help from the General Medical Council or the consultants. They do not really represent the profession at large. In fact I doubt very much if they know or realise our struggle for existence. They will (I sincerely hope) still be able to get their guineas and help us occasionally with their superior knowledge and advice, but it is we who now bear the heat and burden of the day, who really represent the hard-working and self-denying portion of my profession who will suffer, and to all such I say—do as I intend to do; do not accept this Bill at any

cost unless they pay us a living wage. And I would say the least capitation fee which we should accept would be £1 a year, and limit it to, say, twenty visits or consultations, not to include operations or midwifery. For less than this I for one refuse to give up my freedom and become a hired servant of the State.

Let us strike now, once for all. They cannot imprison or punish the whole medical profession, and if they do, all the worse for them, and probably the better for us, for we will at least get what we all need—a holiday.

Rather than accept the slavery and loss this Bill would impose on me I will give up my profession, and with my scanty savings take to farming or labouring, or leave the country.

If Mr. Lloyd George is dissatisfied with the present system of medical charity—though God knows there is enough of it to satisfy any one—why not enlarge or modify it to suit the case? Appoint more poor law and dispensary doctors, and pay them enough to live on without taking private practice.

A soldier is a poor man, yet his doctor gets a good salary for looking after him. Will Mr. Lloyd George reduce the salary of the R. A. M. C.? Why not do away with them altogether and throw the military also in at 6s. a head to the nearest general practitioner, who will need all the patients he can get at this magnificent fee? No, let the Government, since it is in a charitable mood, give State aid to hospitals, increase their staffs, and pay them. Increase the number of dispensary and poor law medical officers, and where is the need of the medical clauses of the Bill as they stand at present?

Without this Bill no person at all, no matter how poor or how degraded, need die without free medical advice, given in many cases at the risk of the giver's own life. Can the same be said of any other profession or trade?

But in all events let us in Ireland (where we still, in most cases at least, adhere to the Hippocratic oath) keep our charity and pseudo-charity distinct. Let us refuse to be tied and bound to a State who would grudge us a bare subsistence. We can always do as we have ever done, dispense our own charity ourselves, and yet let not our right hand know what our left hand doeth, and still belong to a profession which unselfishly and altruistically is doing everything in its power to lessen disease and lighten the lot of mankind, and this to its own detriment. Can this be said of any other profession or trade?

For obvious reasons I do not sign my name to this letter, but I give you permission to reveal it to any one who cares to ask it, and I enclose my card, and in order to awaken the public and my fellow general practitioners to the real results of this Bill, I am sending a copy of this letter to the chief papers, lay and medical, in the United Kingdom.

I sign myself—

AN IRISH GENERAL PRACTITIONER.

THIRD INTERNATIONAL CONGRESS FOR THE STUDY AND PREVENTION OF INFANTILE MORTALITY, BERLIN, SEPTEMBER 11TH TO 15TH, 1911.

IN 1905 and 1907 International Congresses for the study of questions relating to infant mortality and the protection of infant life were held in Paris and in Brussels. Arrangements have now been made for a Third International Congress to be held in Berlin from the 11th to the 15th of September of this year. Of this Congress Her Majesty The Empress of Germany has consented to become Patron. Papers will be read by qualified workers from various parts of the world, and opportunity will be afforded for discussing the progress which has been made in the reduction of infantile mortality, and for developing better and more complete plans for the future. Besides the presentation and discussion of scientific and practical papers, the programme will include an inspection of the measures taken in Berlin for the reduction of infantile mortality as well as a visit to the International Hygiene Exhibition in Dresden, where a special Department is being devoted to infant hygiene. The Executive Committee of the British National Congress on Infant Mortality, 1908, have been asked to form themselves into a committee of organisation for this country, and on behalf of this committee a circular has been issued to Town and County Councils, Boards of Guardians, and other Public Bodies throughout the United Kingdom, with a view to their appointing delegates to the International Congress. In addition to Foreign Governments, the British Government have intimated that they will be officially represented at the Congress. Arrangements have been made with the Railway Companies, under which it is hoped return fares will be obtainable at reduced rates. The fee in respect of each delegate will be £1.

THE DUBLIN JOURNAL

OF

MEDICAL SCIENCE.

AUGUST 1, 1911.

PART I.

ORIGINAL COMMUNICATIONS.

ART. V.—*The Early Diagnosis of General Paralysis.*[a] By WILLIAM HILGROVE LESLIE MACCARTHY, M.D. Univ. Dubl., D.P.H. Oxon.; a Medical Officer of the Park Hospital of the Metropolitan Asylums Board, London.

A CORRECT diagnosis of general paralysis in its initial stages is often of very great importance, for momentous issues may arise in relation to medico-legal questions involving criminal responsibility and testamentary validity. It is now almost universally accepted that, practically speaking, only those suffer from general paralysis who have acquired syphilis, and this renders it essential to discuss the possibility of previous syphilitic infection in making a diagnosis. It must not be assumed that syphilis can be excluded because a history of the disease is wanting or because *residua* cannot be detected on the body. In a question of this kind all the facts of the individual case require careful consideration. If syphilis can be absolutely excluded, it is almost certain that the case is

[a] A Thesis read for the Degree of Doctor of Medicine in the University of Dublin, July 5, 1911.

not one of general paralysis. It must also be remembered that the vast majority of cases of general paralysis occur in the fourth and fifth decades of life; that the disease is much commoner in males than in females; that it may assume different forms; and that there are certain objective signs present. The term paralysis is incorrect, for the condition present is really a paresis—a gross paralytic condition points away from general paralysis rather than towards it. It is a progressive failure of the delicate motor adjustment of the brain affecting the mind's instruments, the speech, and the hand, rather than the coarse paralysis of limbs. There is a gradual shedding of the highest and latest acquired mental functions. Thus the musician fails with his fingers, the danseuse with her feet, the actor plays false, the clerk mis-spells.

A well-marked case of general paralysis, with grandiose delusions in which benevolence is a feature, with unequal, irregular pupils, either reacting sluggishly to light or altogether inactive, while active to accommodation, with tremor in the tongue and face muscles, tremulous, slurred speech, tremulous writing with elision of syllables, and abolition of the knee-jerks, affords an unmistakable clinical picture, and presents no difficulty in diagnosis. But the early prodromal stages of the disease, in which these typical features are absent or present only in modified form, are often a source of great difficulty.

The earliest symptoms of the disease usually take the form of a change in character. The patient's moral and æsthetic feelings may have changed; his character, previously cheerful and gay, may have become irritable, morose, depressed, and changeable in mood; perhaps apprehensive and filled with morbid fears and dread; or previously quiet, careful of his money, a good husband and parent, he becomes neglectful of his home, and wrapped up in some scheme, by which he will satisfy newly-acquired ambitious designs; or he may exhibit marked exuberance of spirits, exhilaration, and a desire to spend money; the purchasing of useless articles, needless telegraphing, sending endless postcards, hiring cabs, are common traits; a hyperæsthesia sexualis, with insufficient

power to gratify his impulses, may exist, this leading to strained marital relations, immorality, and promiscuous intercourse, exhibitionism, or even sexual perversions. However, as Savage and other experienced clinicians have pointed out, general paralysis in any of its forms may develop without mental symptoms for a considerable length of time.

Sometimes the first indications consist in attacks of giddiness, resembling migraine, or convulsive seizures, with or without loss of consciousness, or a temporary loss of speech, or a defect in the memory, at first for recent events. Increasing difficulty of comprehension of external impressions is nearly always a marked feature. Examination of the pupils may afford the most valuable objective sign. Inequality is an indication of organic brain disease, and the existence of a sluggish reaction to light, or the Argyll-Robertson pupil, inactive to light while active to accommodation, is certain evidence in favour of general paralysis. However, the pupils may not show any of these signs. Joffroy has called attention to the importance of irregularity of the pupil as an early sign in tabes and general paralysis. This irregularity of contour may precede all other signs. It may be continuously or only transiently manifest, when the light reflex is tested. The pupil, instead of being circular, is irregularly angular, and owing to the unequal tension of the muscular structures of the iris, it may be displaced from its central position, and become more or less eccentric.

The newer methods for the diagnosis of general paralysis consist in an examination of the blood and cerebro-spinal fluid. They are based upon the doctrine, already referred to, that general paralysis is the result of or attendant upon syphilitic infection; hence the term "parasyphilis." The cerebro-spinal fluid is collected by lumbar puncture with the usual long needle between the third and fourth lumbar vertebræ. The patient lies on his side, his hips close to the edge of the bed, his trunk well flexed. About five to ten c.cm of the fluid are allowed to drop from the end of the needle into a small sterile tube. The patient is confined to bed for twenty-four hours subsequent to making the puncture. The pressure

of the fluid, as shown by the rapidity of flow, is of importance—an increased pressure being met with in most cases of general paralysis, and in such conditions as cerebral tumour and hydrocephalus.

The blood serum is collected from the median basilic vein with a small sterile hypodermic needle after the application of a tourniquet, and the blood is allowed to flow into sterile centrifuge tubes. The serum, after centrifugalisation of the whole blood, is removed with a sterile pipette.

The sero-cytological methods for the detection of syphilis and parasyphilis may be summarised as follow:—

(*a*) *Wassermann's Reaction.*—This depends upon the phenomenon known as "fixation of the complement." Briefly put, it is supposed that the complement, which is a constituent of all serums, is fixed by the supposed immune body (amboceptor) in the blood of the syphilitic after this amboceptor is combined with the syphilitic antigen. The fixation of the complement can be proved by adding to the mixture of syphilitic antigen, antibody and complement, a hæmolytic amboceptor and its antigen, erythrocytes. If complement were free it would immediately combine with the hæmolytic amboceptor and produce hæmolysis of the erythrocytes. Thus there is in the blood serum or cerebro-spinal fluid of an individual with syphilis in either an active or a latent form a substance which inhibits hæmolysis by binding the complement. The presence of an antibody for any bacterial or protozoal infection is similarly demonstrated. The complements in serums are not specific, and will activate a variety of amboceptors.

Since the discovery of this reaction by Wassermann an enormous amount of work has been done, and to-day its value as a diagnostic test is beyond dispute. A positive reaction occurs in 95 to 98 per cent. of typical cases of general paralysis using the blood-serum, and in from 90 to 95 per cent. when the cerebro-spinal fluid is employed. Unfortunately, as several observers[a] have pointed out, in the initial stages of

[a] Henderson Smith and Chandler. Brit. Med. Journ., July 24. 1909. Marie and Levaditi. Ann. de l'Inst. Past. 1907. XXI. 138.

the disease the reaction most often fails; positive reactions are more likely to occur in the later stages of the disease, and especially where convulsions are a marked feature.

(*b*) *Porges-Meier Reaction.*—This consists in the addition of the blood serum of the patient to a solution of lecithin. It is claimed that with luetic serum a flocculent precipitate is produced.

(*c*) *Fornet and Scherischewsky Reaction.*—This consists in the combination of equal parts of known syphilitic serum with that of a case of parasyphilis, such as paresis or tabes, in the same manner as the Heller ring test for albumen is performed. A positive reaction shows itself as a fine ring at the junction of the two serums. In both the above reactions it is claimed that the precipitates produced are the substances in the Wassermann test.

(*d*) *Michaelis Reaction.*—This observer found that the combination of a luetic serum with the extract of a syphilitic liver causes a marked precipitation in the former.

(*e*) *Klauser Reaction.*—This observer claimed that the addition of large quantities of distilled water to luetic serum will cause a precipitation of globulin.

(*f*) *Landsteiner and Mucha Reaction.*—This is an agglutination reaction, and is carried out in the same manner as the Widal test for typhoid. It is claimed that the serum of the syphilitic inhibits the movements of the spirochætes.

(*g*) *Noguchi Reaction.*—This is a precipitation method, and demonstrates the presence of globulin in the cerebro-spinal fluid.

It has been known since 1901, from the research of Achard, Lœfer and Lanbry, that in syphilitic disease involving the central nervous system there was an increase in the globulin content of the cerebro-spinal fluid as well as in the blood-serum. This increase seems to be confined to acute inflammations of the meninges and to atypical inflammatory chronic diseases such as general paralysis and tabes. In tabes without mental symptoms the globulin content is not as pronounced.

The technique of the Noguchi test is as follows: To .1 cc.

of cerebro-spinal fluid there is added .5 cc. of 10 per cent. butyric acid solution, and the mixture is heated. Then .1 cc. of 4 per cent. sodium hydrate solution is added, and the mixture is heated again.

It is essential that no blood or pus be present, and that the butyric acid be pure. An increase in globulin, particularly euglobulin, shows itself as a heavy flocculent precipitate of varying degrees. Normal fluids show a faint opalescence. Noguchi found the reaction to be specific in 90 per cent. of his cases. Acute infections of the meninges must necessarily be excluded.

(*h*) *Ross and Jones' Reaction.*—This is also a precipitation method, and demonstrates the presence of globulin in the cerebro-spinal fluid. In this, as in the Noguchi reaction, a positive finding is obtained in the case of general paralysis, tabes, tertiary syphilis, and syphilis of the nervous system.

The technique of the Ross-Jones' test is as follows:—To 1 cc. of cerebro-spinal fluid there are added 2 cc. of saturated solution of ammonium sulphate solution after the manner of the ring test for albumen. A faint network ring, appearing almost at once or within three hours, indicates a positive reaction. The ammonium sulphate used must be pure, and there must be no admixture of blood in the cerebro-spinal fluid.

The extent of the ring, as well as the time it takes to appear, are of importance. By modifying the dilutions of cerebro-spinal fluid it is claimed that general paralysis may be differentiated from syphilis of the nervous system, there being a marked increase of the globulin in the former and the ring appearing in a shorter time. The reaction is always present in every acute inflammation of the cerebro-spinal system, but, as in the Noguchi reaction, never occurs in any chronic inflammation except syphilis. It is probable that the globulin increase is due to the lytic effect of the syphilitic toxin on the various protein compounds in the body. It is known that the globulin is the true globulin (euglobulin) as it is precipitated by the addition of 33 per cent. ammonium sulphate. It is supposed that it is this euglobulin which combines with the

lecithin of the antigen in the Wassermann test, and thus forms a compound which binds the complement and inhibits hæmolysis.

(*i*) *Cytodiagnosis.*—There is a mononuclear and plasma cell leucocytosis in the cerebro-spinal fluid in almost every case of general paralysis and in tabes. It is more pronounced in the early stage of the disease, and may be slight or even absent in the later stages. It does not correspond to the increase of globulin, but usually occurs somewhat earlier.

To one volume of cerebro-spinal fluid (which should be examined as soon as possible after withdrawal) there are added two volumes of 95 per cent. alcohol. The precipitate thus produced is centrifuged, hardened in alcohol and ether, embedded in celloidin, sectioned and stained. Under normal conditions, using a sixth-inch objective, sections thus prepared show only from two to five leucocytes, but under abnormal conditions, as in paresis or acute infections, this number may reach hundreds.

Of the foregoing tests, those of Ross-Jones and Noguchi, together with the cell-count, are the most reliable, and their simplicity brings them within the reach of the general practitioner.

The results obtained in a series of forty-one cases in which these tests were applied early in the disease, prior to the development of the typical symptoms, may be tabulated as follows :—

No. of Cases	Ross-Jones' Reaction		Noguchi Reaction		Cell-count Leucocytosis	
Males	Positive	Negative	Positive	Negative	Positive	Negative
41	38	3	39	2	39	2

Examination of the pupils in the above cases about the same period gave the following results :—

Pupils equal and of normal size in 8 cases.

Pupils with bilateral myosis in 7 cases.

Pupils with bilateral mydriasis in 2 cases.

Pupils unequal in 24 cases.

The pupillary reaction was normal in 8 cases, sluggish in

13 cases, absent on one side in one case, and absent on both sides in 19 cases.

The diseases with which general paralysis is sometimes confounded are cerebral syphilis, alcoholism, and neurasthenia. In cerebral syphilis, as in general paralysis, the Ross-Jones and Noguchi reactions are positive, and leucocytosis is present. But cerebral syphilis usually occurs earlier in life than general paralysis, optic neuritis is often present, together with Babinski's reaction, ankle clonus, severe headache, worse at night, and often waking patient up at a definite time in the early morning. There may also be definite tenderness on percussion of the head at some definite spot. Evidence of focal lesions is to be found, these being usually removed or abated by mercurial treatment. Any mental disturbance present consists for the most part in simple dulling of the intellectual faculties. Mental exaltation does occasionally occur, but it is not associated with the childish optimistic carelessness and the demential boasting that characterise general paralysis.

Alcoholism is more insidious than syphilis in its imitation of the symptomatology of general paralysis, for it can, and indeed very often does, produce a form of disorganisation of the character and intelligence which is very similar to that occurring in the initial stages of general paralysis, and hardly less serious. But the grandiose delusions of alcoholism are usually ascertained only by conversation with the patient, whereas the general paralytic babbles of his wealth and strength unsolicited; the alcoholic also usually presents a characteristic mixture of anxiety and humour. In alcoholism, rigidity of the pupils, abolition of the knee-jerks, dysarthria, loss of facial expression, and dysgraphia, accompanied by tremulousness and by the characteristic elision or repetition of syllables in writing, may all be present. It is often asserted that the occurrence of visual hallucinations serves to remove all doubt as to the nature of the case, but, unfortunately, not all alcoholics suffer from hallucinations, while some undoubted paralytics have visual hallucinations exactly like those of alcoholics. It is in such cases that the tests already described are indispensable. Both the Ross-Jones and the

Noguchi reactions are negative, and leucocytosis is absent, and an early diagnosis may thus be arrived at. It must be remembered that an early sign of general paralysis is often a lapse from moderation to intemperance.

There is often great difficulty in deciding whether a case is one of neurasthenia or the prodromal stage of general paralysis, for it is the neurasthenic, the subject of syphilis, who is especially liable to develop general paralysis. But here again the above reactions are negative and leucocytosis is absent. Neurasthenics appreciate too keenly their illness, exaggerate their symptoms, and at the same time try to alleviate their condition. They complain of failing memory, which really does not exist, while paretics often fail to recognise such mental defect. The physical symptoms of neurasthenia are confined to dizziness, slight stammering when embarrassed, and a fine tremor of the tongue, with increase of the tendon reflexes. One should at least think of general paralysis when neurasthenic symptoms appear for the first time in middle life without adequate cause.

ART. VI.—*The Use of Atropine as a Preventive of Pulmonary Complications following the Administration of Ether as a General Anæsthetic.*[a] By ERNEST A. W. HENLEY, M.D. Univ. Dubl.

THE question of administration of anæsthetics is one which is of the greatest interest and importance to all branches of the profession—to the physician, the surgeon, and the obstetrician: to the general practitioner as well as to the specialist. In fact the brilliant advances in surgery which have been so marked during the last fifty years would have been well nigh impossible but for the introduction of the various anæsthetics which are used with such success and with such a measure of safety at the present time. Many important discoveries in the physiological world have been achieved without inflicting any suffering on the animals employed in

[a] A Thesis read for the Degree of Doctor of Medicine in the University of Dublin, July 5, 1911.

conducting the various experiments. There is no exaggeration in saying that there is no discovery which has done more to alleviate human suffering, and in a great many cases to prolong human life, than the use of the various agents which are employed in the production of general anæsthesia.

When we come to examine these agents we find that they vary very much in their effects both as regards the length of anæsthesia produced and more particularly the risks of administration. These risks may be divided into two classes—immediate and remote. In some cases—*e.g.*, chloroform—the risk (if any) is chiefly immediate, while in others—*e.g.*, ether—the risk of post-anæsthetic complications is often greater than that of the administration itself.

When we take the statistics as to the relative safety of ether, chloroform, and other agents, one series of cases, which includes 80,000 cases, the chloroform deaths were 1 in 1,300, and ether fatalities 1 in 9,319. Another series of over 800,000 cases gives for chloroform a death-rate of 1 in 3,258, and for ether 1 in 14,987. Sir Lambert Ormsby, in Dublin, publishes a table which covers over 250,000 cases, and gives the mortality from chloroform as 1 in 2,873, ether 1 in 23,204, and chloroform and ether, 1 in 5,558. In the first series, which are taken from St. Bartholomew's Hospital Reports for twenty-five years, it would appear that ether is about seven times as safe as chloroform. The tendency to a too high ether death-rate from the inclusion amongst the ether cases of desperately bad subjects is counterbalanced by a tendency to a too low death-rate from the exclusion of cases of pulmonary complications due to ether. It is interesting to note that this ratio of seven to one agrees with the relative toxicity of chloroform and ether as estimated by Augustus Waller. The other series of statistics place the risk of chloroform as five times as great as that of ether. Taking the average of all these cases over a million, we may assume that with a heterogeneous assortment of anæsthetists, patients and operations, the risk to life is only about one-sixth as great in using ether as when chloroform is employed. The only conclusion one can arrive at is that in the absence of special circumstances an anæsthetist

ought to use ether in preference to chloroform in the majority of cases in ordinary surgical practice.

Having arrived at this stage, the next step in the inquiry ought to be—What are the disadvantages in using ether, and how may they best be combated? There is no doubt that opinions on this subject have changed considerably during the past ten years, and even the staunchest supporters of ether now admit that its use, especially in prolonged operations on the trunk, is often followed by pulmonary complications, usually a bronchitis or pneumonia, which occasionally prove fatal. As one observer has remarked, the difference between deaths under chloroform and under ether is that in the first case the coroner signs the death certificate, and in the latter case it is usually signed by the house surgeon.

In the St. Thomas's Hospital reports for 1900 a series of 3,000 cases of various anæsthetics was examined and ten cases of bronchitis and broncho-pneumonia were observed, all of which followed the administration of ether preceded by nitrous oxide.

The inhalation of ether vapour causes a certain amount of irritation of the bronchial mucous membrane, which is followed by an increased secretion of mucus. This mucus, if allowed to accumulate in the upper air passages, caused a varying amount of respiration, embarrassment and cyanosis, due to mechanical obstruction by mucus and to a spasmodic contraction of the tubes. If the condition is not relieved the mucus accumulates in the smaller bronchial tubes, and with increasing cyanosis the cardiac muscles become poisoned by retained CO_2 in the blood, and in more advanced cases the respiratory centre becomes affected, and asphyxial syncope follows. This, of course, is a most advanced condition. Usually one gets a case with a moderate amount of mucus, and if the case has been a long one, and especially if there is a painful abdominal wound or tight bandage which prevents the patient coughing or breathing freely, the presence of this mucus may easily set up a bronchitis or broncho-pneumonia.

It seems, then, that the hyper-secretion of mucus which is characteristic of ether anæsthesia is the chief factor in the

production of ether bronchitis and ether pneumonia. Patients with pre-existing pulmonary, pleural, or bronchial disease are obviously more liable to such complications, but even healthy individuals are liable to this hyper-secretion which may be so excessive as to deserve the title of mucus inundation of the lungs, in which the symptoms are very like those of acute pulmonary œdema.

I shall not discuss the various points with regard to the method of administration of ether, which have a special bearing on the avoidance of this danger of hyper-secretion of mucus, but will briefly mention a remedy which I have used for the past two years in this connection.

Atropine administered internally diminishes the secretion of bronchial and tracheal mucus, and also diminishes spasm of the muscular coat of the bronchial tubes by its action in paralysing the peripheral nerve fibres of the vagus. There are other actions when moderate doses are administered—viz., increase in blood pressure and increase in frequency and depth of respiration. The most important results are the diminution in the secretion of mucus and the lessening of bronchial spasm.

The method of administration I have adopted is to give $\frac{1}{100}$ gr. atropine sulphate hypodermically about fifteen minutes before commencing the induction of anæsthesia, and repeating the injection if the patient shows any signs of mucus, however slight. I have never seen any trouble or complication arising out of the administration of atropine, and the results, as far as mucus secretion, have been extremely satisfactory. The atropine in all cases diminishes, and in most cases inhibits, the secretion of mucus, and the anæsthetist is spared the necessity of frequently swabbing out the throat, to the patient's, the surgeon's, and his own comfort.

The recovery of the patient is much more rapid, and post-anæsthetic sickness is uncommon, a result which I think may be attributed to the absence of mucus, the presence of which in ordinary cases is responsible for a good deal of vomiting, the secretion having been previously swallowed.

I regret that I am unable to give accurate statistics of the number of cases in which atropine has been administered,

but my records are in the Southern hemisphere at present, I can only say that I have used it constantly when giving anæsthetics of more than a half hour's duration, and when operating myself I get my anæsthetist to give from $\frac{1}{100}$ to $\frac{1}{50}$ atropine to my patients. As I stated before, the results have been uniformly good, and I am glad to say I have not seen a case of ether bronchitis or pneumonia during the past two years.

In conclusion, I would like to add that I have found the administration of atropine hypodermically of immense value in the treatment of œdema of the lungs due to cardiac or renal causes, and have successfully staved off more than one attack in a patient under my care last year.

ART. VII.—*Clinical Reports of the Rotunda Lying-in Hospital, Dublin*, 1909-1910.[a] By ERNEST HASTINGS TWEEDY, F.R.C.P.I., Outgoing Master of the Hospital; and R. J. ROWLETTE, M.D. Univ. Dubl., Pathologist. (Illustrated.)

(*Continued from page 26 and concluded.*)

GYNÆCOLOGICAL REPORT.

THERE were 504 patients admitted to the Gynæcological Wards, which number, combined with those of the maternity, make 3,028 admissions throughout the year.

One hundred and sixty-one abdominal sections were performed, and there were twenty cases in which the abdomen was opened through the vagina. Sixteen of these were vaginal fixations. We performed fourteen abdominal myomectomies. Several of these necessitated the almost complete division of the uterus, and the recovery in all cases was uneventful. Two of these patients, who had come to the hospital because of sterility, have since been successfully delivered.

We had ten Wertheim operations with one death. I think this operation should be performed when practicable

[a] Read before the Section of Obstetrics in the Royal Academy of Medicine in Ireland on Friday, May 22, 1911.

in all cases of uterine cancer, whether of the body or cervix.

We operated for the cure of complete tears fourteen times, with uniform success after the first operation.

Statistical Returns of the Gynæcological Department.

Table I.—*Showing nature and number of Operations.*

Abdominal Section	160
Vulva and Perineum—	
Elephantiasis excision	1
Carcinoma ,,	1
Kraurosis ,,	1
Hymenectomy for atresia	1
Lacerations of perineum (91)—	
Complete	14
Incomplete	77
Urethra—	
Caruncle	2
Vagina—	
Fistula, vesico-vaginal	3
Anterior colporrhaphy	23
Anterior colpotomy	17
Posterior colpotomy	3
Dilatation	1
Rectum—	
Hæmorrhoids excision	2
,, Whitehead	1
Carcinoma resection	1
Cervix—	
Trachelorrhaphies and amputations (85)—	
Schroeder	73
Emmet	6
Sänger	5
Circular	1
Posterior division	12
Uterus—	
Curettage (simple)	108
,, combined with other operations	160
Polypus	12
Ventral suspension	56*
Vaginal suspension	16
Alexander Adams	3
Ventral fixation	1
Ventral fixation of stump of cervix after hysterectomy	2
Myomectomy—	
Abdominal	14
Morcellement	1
Hysterectomy—	
Supra-vaginal	15
Complete	9
Wertheim	11
Cæsarean section	2
Tubes and Ovaries—	
Ovariotomy	13
Resection of ovary, with other operations	13
Resection of tube, with other operations	11
Salpingectomy	6
Salpingo-oöphorectomy with other operations—	
Double	5
Single	9
Salpingo-oöphorectomy alone—	
Double	1
Single	11
Tubal pregnancy	3
Miscellaneous—	
Appendicectomy	5
Herniotomy (4)—	
Femoral	1
Inguinal	1
Umbilical	2
Amputation of Breast	1
Excision of retroperitoneal tumour (tubercular)	1
Nephropexy	1
Colostomy	1
Patients	504

* Of the ventral suspensions 35 were unaccompanied by any other operation.

TABLE No. II.—*Abdominal Hysterectomies (Malignant Disease).*

No.	Name	Date	Age	Disease	Operation	Result	Remarks
1	K. R.	31.5.'10	35	Epithelioma of cervix	Wertheim	Recovered	2-para, the last an abortion 3 months previously.
2	L. B.	25.6.'10	48	Adeno-carcinoma of body	,,	,,	Single, nullipara; 2 ovarian cysts, each the size of a fœtal head.
3	E. W.	19.7.'10	61	Epithelioma of cervix	,,	,,	15-para, the last 17 years previously; wound suppurated; leakage of urine on coughing.
4	M. C.	15.7.'10	58	,, ,,	Pan-hysterectomy	,,	1-para, the last 28 years previously; too great involvement for ordinary Wertheim; only one ureter seen.
5	K. M.	9.8.'10	40	,, ,,	Wertheim	,,	9-para, the last two years previously; wound suppurated superficially.
6	M.M'A.	19.8.'10	60	,, ,,	,,	Died 24.8.'10 See Table No. IV.	10-para, the last 23 years previously.
7	E. D.	24.8.'10	44	,, ,,	,,	Recovered	6-para, the last 5 years previously; 2 days after operation leakage of urine occurred; a large fistula was closed 3 weeks later.
8	J. D.	6.9.'10	40	Adeno-carcinoma of body	,,	,,	No full term children; 2 abortions.
9	G. R.	26.9.'10	60	,, ,,	,,	,,	3-para.
10	A. H.	30.9.'10	51	Epithelioma of cervix	,,	,,	9-para, the last 19 years previously.
11	S. H.	4.10.'10	40	Sarcoma of body	Pan-hysterectomy	,,	Single.

TABLE No. III.—*Abdominal Myomectomies.*

No.	Name	Date	Age	Disease	Result	Remarks
1	K. B.	9.11.'09	40	Large interstitial myoma, 3 ins. diam.	Recovered	3-para ; the uterine cavity was opened in the removal of this myoma.
2	E. M.	3.12.'09	28	Large myoma (interstitial)	,,	Nullipara ; about $\frac{1}{3}$ of the uterus was removed, along with a myoma about 3 times the size of the uterus. This patient became pregnant 3 months later.
3	C. M.	22.2.'10	35	2 myomata (interstitial)	,,	Single ; large myoma springing from posterior wall, also one in right broad ligaments ; cysts of both ovaries.
4	K. P.	8.3.'10	37	Myoma, 3 × $2\frac{1}{2}$ ins. (interstitial)	,,	Single
5	D. C.	6.5.'10	32	Myoma, 4 × 4 ins. (interstitial)	,,	Single ; the scar occupied the whole of the anterior wall.
6	D. B.	24.6.'10	37	Pedunculated subserous myoma	,,	Single.
7	W. M.	22.7.'10	36	3 interstitial myomata	,,	Nullipara.
8	N. R.	2.8.'10	37	1 large myoma removed	,,	Nullipara ; several small myomata, none larger than a small marble were left.
9	E. D.	16.8.'10	30	Multiple interstitial myomata	,,	Nullipara ; cavity of uterus opened, in which a 6 weeks' fœtus was found.
10	J. H.	12.8.'10	38	,, ,,	,,	Nullipara.
11	L. H.	23.8.'10	38	,, ,,	,,	Nullipara ; uterine cavity opened.
12	C. M.	9.9.'10	40	1 myoma (interstitial)	,,	Nullipara.
13	L. F.	6.10.'10	28	3 myomata	,,	Nullipara ; 2 of the myomata were interstitial, the third growing into the layers of the broad ligament.
14	A. F.	18.10.'10	26	Large subserous senile myoma	,,	This patient was pregnant, and did not abort after the myomectomy.

TABLE No. IV.—*Mortality.*

No.	Name	Age	Date of Operation	Died	Cause of Death	Remarks
1	K. M.	25	6.1.'10	14.2.'10	Sloughing of spleen after subphrenic abscess	Patient sent in on account of abdominal pains. Six months pregnant. Exploration showed tumour just below ensiform. A large quantity of pus was evacuated. Delivered the day following the operation. A slough came away from the wound 2 weeks after the operation; this was the spleen.
2	C. L.	38	15.2.'10	21.2.'10	Abdominal cancer - -	An ovarian cyst of the right side, evidently benign, was removed on 8.1.'09, when patient was 4 months pregnant. Exploration showed abdomen to be full of cancer. *Post-mortem*—cancer of abdomen, pleura and diaphragm.
3	D. H.	37	8.4.'10	14.4.'10	General peritonitis -	Double salpingectomy for very advanced peritonitis. Rectum injured. Patient did well for 6 days, when she got violent abdominal pain and died on the 7th. *Post-mortem* showed general peritonitis, and a hole in the rectum which was made during the separation of adhesions had sloughed.
4	M. M'A.	60	19.8.'10	24.8.'10	Congestion of lungs -	Patient died showing signs of sepsis after Wertheim, but no such evidence could be obtained in the *post-mortem* which showed a mass of glands firmly fixed to the common iliac, at its bifurcation, and also congestion of both lungs.
5	A. C.	36	—	11.10.'10	Septicæmia - -	Patient came to hospital moribund. She had had an incomplete abortion 3 weeks previously.

PATHOLOGICAL REPORT (by DR. ROWLETTE).[a]

THE work of the Laboratory continues to increase at even a more rapid rate than the clinical work of the Hospital. In the year now under review 261 specimens were dealt with as against 143 in my first ten months in 1905.

Autopsies were performed in the case of seven adult patients, three of whom died in the maternity, four in the gynæcological wing. Brief notes are appended :—

CASE I. (Gynæcological).—K. M., aged twenty-five, died February 12th, 1910. Autopsy same day.

Patient had had pneumonia, and had, after discharge from hospital, developed a large subphrenic abscess, which was opened. A fortnight after the operation, a large necrotic mass, the size of one's hand, came away through the wound.

Autopsy.—Wound from ensiform to umbilicus, filling with granulations.

Right pleural sac—many adhesions, with one pint encysted turbid fluid. Large abscess buried in base of right lung. Extensive broncho-pneumonia.

Left pleura—adherent everywhere, and a little fluid. Abscess buried in base of lung.

Heart—small; mitral valve thickened.

Abdomen—Abscess-sac in left lobe of diaphragm, with sinus leading to wound and discharging green pus. Entirely shut off from rest of peritoneum, which, except in pelvis, is quite healthy. Adhesions in pelvis enclosing green pus in small quantity in Douglas's pouch. Abscess, size of hen's egg, in right ovary.

Spleen absent, except small piece, size of hazel nut.

Kidneys healthy.

Liver congested.

The absence of the spleen at the autopsy leaves no doubt that it had been the necrotic mass which puzzled us some weeks earlier.

CASE II. (Gynæcological).—C. L., aged thirty-eight, died February 21st, 1910. Ovarian cyst removed twelve months ago.

[a] Read before the Section of Pathology of the Royal Academy of Medicine in Ireland on Friday, May 19, 1911.

Right pleura contains several pints of slightly bloody fluid. Pleura is infiltrated everywhere with cancerous tumours, some mere nodules, others large plaques. Diaphragm is most affected, and the parietal pleura more than the visceral. The lung is small and shrunken, being enclosed in a case of tumour material.

Left pleura and lung healthy.

Pericardium shows slight infiltration on right side.

Heart normal.

Abdomen—Liver is adherent to *diaphragm and anterior abdominal wall*, also to colon. The *liver and diaphragm* are welded together into a tumour, in the middle of which is a cavity containing a pint of bloody fluid, some of the blood having clotted. In *abdominal wall* near liver are several small tumours, also small tumours in *peritoneum*, near liver. Several small growths in *liver*. None elsewhere in peritoneum except in *pelvis*, where there are several small nodules.

Other organs healthy.

I recounted the history of this case in my last report—*q.v.* [a]. The patient had had a papillary cyst removed in January, 1909. The masses found in the body at the autopsy showed a papillary structure.

Case III. (Gynæcological).—M. K., aged thirty-seven, died April 14th, 1910. Patient had an operation for removal of pus-tubes six weeks previously. There were extensive adhesions, and unfortunately the rectum became punctured during the operation.

Abdomen—General peritonitis, with large quantity of foul-smelling pus. A hole, size of a florin, has sloughed in rectum, with escape of fæcal material into pelvic peritoneum.

Case IV. (Maternity).—M. D., aged twenty-four, died May 17th, 1910, a fortnight after confinement.

Right lung normal.

Left lung—Tubercular cavity in apex. Patches of tubercular pneumonia in upper and lower lobes. Large red infarct in lower lobe, occupying three-quarters of the lobe.

[a] Transactions of the Royal Academy of Medicine in Ireland. Vol. XXVIII. Pp. 366-7.

Pleural sac completely obliterated by adhesions.

Heart soft, pale, flabby, with fatty deposit in epicardium. Cavities empty. Valves normal.

No peritonitis.

Spleen very soft and diffluent, twice normal size, and containing several infarcts.

Kidneys and heart normal.

Uterus, size of four months' pregnancy. Necrosis and gangrene of endometrium.

Case V. (Maternity).—C. K., aged thirty, died June 26th, 1910. Died two hours after delivery by forceps. Only lesion discovered—rupture of posterior wall of vagina and cervix, with consequent severe hæmorrhage into peritoneum.

Case VI. (Maternity).—M. O'B., aged thirty-eight, died August 4th, 1910, seven days after confinement. She died suddenly on rising from bed.

Lungs very œdematous.

Heart dilated.

Other organs all normal.

I can only suggest that acute dilatation of the heart was the cause of death.

Case VII. (Gynæcological).— M. M'A., aged sixty, died August 24th, 1910, six days after Wertheim's operation for malignant disease. Only lesion, marked congestion of *lungs*. Mass of cancerous glands fixed to common iliac artery at its bifurcation.

Curettings and other fragments were examined on eighty-four occasions for diagnostic purposes.

Table I.—Examination of Curettings and other Fragments for Purposes of Diagnosis.

Endometritis . .	40	Myoma of uterus .	2
Endocervicitis . .	2	Decidua, placenta, &c.	10
Epithelioma of cervix	6	Carcinoma of ovary .	1
Adeno-carcinoma of uterus	4	Normal tissue, clot, débris, &c. . .	15
Erosion of cervix .	1		
Mucous polypus .	3		

The 40 cases of endometritis have been described as follows :—

Table II.—Endometritis.

Glandular (including Cystic) . .	23	Interstitial . .	1
		Septic . . .	16

This classification presents, in our present lack of knowledge of the pathology of the endometrium, many difficulties. Many sections presented true inflammatory changes as well as structural changes in the glands, and the separation into "glandular" and "septic" does not proceed on any exclusive principle of classification. Of the 23 specimens described as "glandular" the glands presented cystic changes in three.

Tumours and other operation specimens were examined in 114 cases.

Table III.—Tumours and other Operation Specimens.

Epithelioma of vulva .	2	Ectopic pregnancy .	4
Epithelioma of cervix .	8	Pyo-salpinx and Salpingitis . . .	15
Adeno-carcinoma of uterus . .	2	Tubercular salpingitis .	6
Sarcoma of uterus .	1	Cyst of ovary . .	22
Fibro-myoma of uterus	37	Dermoid . .	3
Mucous polypus .	5	Carcinoma of ovary .	2
Papilloma of cervix .	1	Parovarian cyst .	1
Prolapsed uterus .	1	Tubercular sinus .	1
Cervix . . .	1	Carcinoma of breast .	1
Carcinoma of tube .	1		

One of the cases of adeno-carcinoma of the uterus is of interest in that two ovarian cysts were present, in one of which were masses of the same nature as the tissue in the uterus.

Sarcoma of the uterus is a comparatively rare condition. This is only the third specimen we have met in six years' practice at the Rotunda. The tumour is a large, soft, homogeneous mass, situated, as nearly all these tumours

are, in the endometrium of the fundus. It had infiltrated the wall of the uterus, so that it was invading the peritoneum and forming adhesions with neighbouring viscera. Microscopically, it consisted of irregular, large, round cells.

An examination of the fibroids as regards degeneration was again carried out. Of the 37 cases, 25 presented no signs of degeneration. Changes noticed in the twelve remaining were—hæmorrhage in 2, mucoid change in 2, cystic spaces in 2, grey necrosis in 2, red degeneration in 1; 1 was inflamed, and 1 large myoma occurred in a uterus presenting also an epithelioma of the cervix.

Carcinoma of the tube is a comparatively rare disease, but Mr. Alban Doran last year was able to collect records of one hundred cases. Of these only one, in the practice of Sir William Smyly and Dr. Earl, had occurred in Dublin. Our specimen was a large, soft, very friable, almost diffluent mass, whose anatomical relations were difficult to make out. Microscopic examination showed in some parts a papillary structure, though in much of the mass the growth of cells was so diffuse that from some of the first sections made one might have been in doubt as between a diagnosis of carcinoma and one of sarcoma.

One of the cases of ectopic pregnancy is of special interest (Plate), in that it is the first recorded case in Ireland of true primary ovarian pregnancy. It has already been shown at the Section of Obstetrics of this Academy, and been reported on by the Committee of Reference, with the help of three expert advisers—Drs. O'Sullivan, Earl, and Jellett.[a] The diagnosis has been borne out by a Committee of Reference of the Royal Society of Medicine in London.[b]

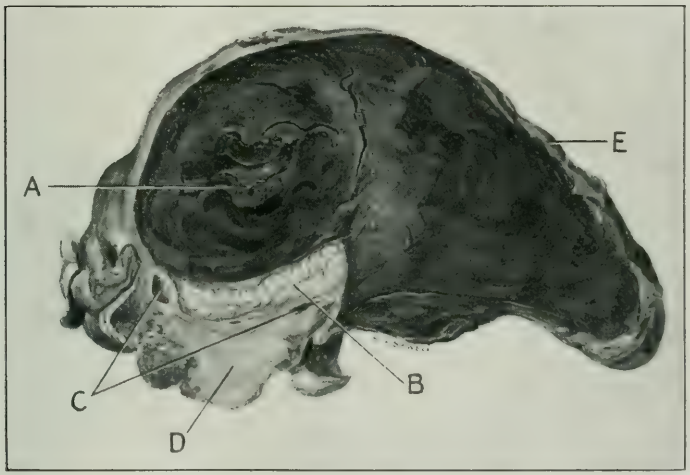
Of the 21 cases of inflammation of the tubes examined, 6 were tubercular. The proportion in six years has been

[a] Transactions of the Royal Academy of Medicine in Ireland. Vol. XXVIII. Pp. 317–325.

[b] Proceedings of the Royal Society of Medicine. Vol. III. No. 5. P. 132.

Plate I.

Case of Primary Ovarian Pregnancy.



A, blood-clot containing chorionic villi; B, corpus luteum; C, blood-vessels; D, ovarian tissue; E, fibrin on surface of clot.

53 and 19. This is, if anything, a low estimate of the activity of the tubercle bacillus in the tubes, as it is easy in many cases of chronic fibrotic conditions to overlook the distinctive lesions of tuberculosis. A point of some interest is the frequency with which cysts of the ovary are related to chronic salpingitis. In 4 of the cases this year small cysts of the ovary occurred—*i.e.*, in about 33 per cent. of the cases of chronic salpingitis, non-tubercular in origin.

Twenty-five cystic conditions of the ovary were examined; 15 of these specimens were ordinary multilocular, smooth-walled cysts, 1 was a simple papillary cyst, and 3 were malignant papillary cysts; 3 lutein cysts are in the number, and 3 dermoids.

In my last Report I discussed the tendency to malignancy in papillary cysts. This year it will be noticed that no less than 3 out of 4 of the papillary cysts examined showed definite microscopic evidence of malignancy. Moreover, the fourth showed such excessive epithelial proliferation that I would not care to be dogmatic as to its innocence.

Two dermoids occurred in one patient. Another dermoid examined was in part malignant. A large mass of solid tissue lies at the back of the skin-covered surface Its structure is carcinomatous. In addition, a large, solid, but more friable mass was found in the pelvis entirely separate from the ovary.

In addition to the three cases of malignant papilloma and this case of malignant dermoid, two other cases of malignant disease of the ovary were encountered. As usual in primary cancer of the ovary, the disease was bilateral. No primary focus of disease elsewhere in the body could be discovered. It is, I think, very remarkable that the number of cases of malignant disease of the ovary (6), so closely approaches the number of the uterus (11), in view of the received opinions of the frequency of the latter condition and the rarity of the former.

The uterine lochia from morbid cases were examined bacteriologically on 55 occasions.

TABLE IV.—ORGANISMS OBSERVED IN OR ISOLATED FROM THE LOCHIA IN 55 MORBID CASES :—

Diplococcus A. . .	39	Gonococci . .	3
,, pneumoniæ	5	Bacilli . . .	17
Staphylococci . .	5	Negative . .	7
Streptococci . .	5		

In a large proportion of the cases the organism failed to grow, and therefore the diagnosis is at best tentative. As this failure generally occurred in the case of patients whose recovery was rapid, it was probably due to a low state of vitality of the organisms themselves. Up to recently the determination of the organism present seemed to be of little more than academic interest. Within the past year, however, it has taken an important place in the treatment of the patient. Encouraged by the reports of many workers elsewhere, we determined to apply vaccine treatment to our morbid cases whenever it was found possible to determine the organism, if the patient's temperature did not come down after one douching. Prior to this I had treated one private patient with a stock pneumococcus vaccine with encouraging results, though she ultimately succumbed to a secondary streptococcal peritonitis.

In one case in the Hospital in the year under review vaccine treatment was applied with most satisfactory results.

M. A. C., aged nineteen, was delivered naturally of a living child on May 15th, 1910. On the fourth evening her temperature reached 102°, and her pulse was 130. Her temperature continued to be irregular for thirteen days, though on the ninth and tenth days it remained normal. It fluctuated greatly, with a variation in the bi-daily takings of anything up to seven degrees. Her pulse also varied very much. On the fourth, fifth, sixth, and tenth evenings the uterus was douched and explored, some

decidua and débris being removed on each occasion. In the material removed small diplococci and streptococci were found. On the fourteenth day, with a temperature of 104.4°, and a pulse of 140, the uterus was freely movable, the fundus being at the pelvic brim. No masses could be felt in the pelvis, and there was no pelvic tenderness. On douching, the uterus was found to be empty. The Calmette test gave no reaction. On the fifteenth day the temperature was normal, and the pulse below 90. On the sixteenth the temperature rose to 104.4°, and the pulse to 120. On the following day the patient received five million of a stock preparation of streptococci. Pulse and temperature thereafter became and remained normal. On the twenty-first day the dose was repeated. The patient left hospital quite well on the twenty-fourth day.

This case has been so encouraging that we have within the past six months applied similar treatment much more widely. The results will be published in full at a later date. Suffice it to say here that in no case have we had any occasion to regret using the vaccine, and in no case where a definite bacteriological diagnosis was made has the patient died.

I desire, in conclusion, as this is the last Report to appear under the authority of the late Master, Dr. Tweedy, to express to him my very grateful sense of the consideration he has always shown for the Pathological Department, the important place he has given it in the work of the Hospital, as well as for his uniform patience with our failures to give assistance, and his courtesy to myself personally.

THE ACTION OF RUBBER ON MERCURIAL ANTISEPTIC SOLUTIONS.

From experiments made in the Wellcome Physiological Research Laboratories, Mr. A. T. Glenny, B.Sc., and G. S. Walpole, B.Sc., conclude that not only do mercurial antiseptic solutions in which manufactured rubber articles are placed for some time lose mercuric salt, but the rubber surface is attacked.—*Journal of Hygiene*, Vol. X., No. 4, 1910

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

A Manual of Pathology and Morbid Anatomy. By T. Henry Green, M.D., F.R.C.P., Consulting Physician to Charing Cross Hospital, and to the Brompton Hospital for Consumption and Diseases of the Chest. Eleventh Edition, revised and enlarged by W. Cecil Bosanquet, M.A., M.D., Oxon., F.R.C.P. Lond., Assistant Physician (late Pathologist) to Charing Cross Hospital and to the Brompton Hospital; formerly Fellow of New College, Oxford. London: Baillière, Tindall & Cox. 1911. Demy 8vo. Pp. x + 642.

Compared with one of the earliest editions of "Green's Pathology," the present portly volume of 642 demy octavo pages would scarcely be recognised as the same well-known work in its state of perfected evolution.

An eleventh edition disarms hostile criticism, and happily there is no need for it in the present case.

Six years have passed since the tenth edition was published, and among other changes the familiar name of "H. Renshaw," "with whose firm the fortunes of Dr. Green's book were so long associated," has disappeared from the title-page. Mr. Renshaw has retired from active business, and Messrs. Baillière, Tindall & Cox have published this eleventh edition as one of their valuable "University Series" of manuals for students and practitioners.

The work is divided into two parts. The first deals with general pathology; the second, with diseases of special tissues and organs. The first Part includes twenty-two chapters, the second Part includes twelve chapters.

Into the chapters (IX. to XII., inclusive) on "Parasites," much new matter has been introduced in connection with the

protozoan origin of disease, a special section of Chapter X. being given up to the Spirochætes, of which six varieties are described.

In his Preface the reviser, Dr. Bosanquet, reminds the reader that advance in the domain of Chemical Pathology has been steady, if somewhat slow, and it is to this branch of science we must look for the most striking discoveries of the future. He admits that the nature of the Nutritional Diseases remains shrouded in obscurity. The problem, also, of the origin of tumours remains unsolved, but this fact "has not compelled the abandonment of the view as to the nature of new growths which was tentatively put forward in former editions." The various hypotheses which have been devised to explain the origin of tumours are set out in Chapter XVIII. under the headings—the theory of embryonic remains, the parasitic theory, the theory of altered tissue-resistance, the theory of nervous influence, and the biological theories of Beard, Farmer, B. Moore, and Walker—based on what is called a *heterotype mitosis*, in which some unknown stimulus has caused the cells of a tissue or organ to revert to a primitive germinal type. In attempting—on page 312—a classification of tumours, the author writes:—"They naturally fall into two main groups—(1) those consisting of tissue resembling fully-differentiated cells ('*histioid*' tumours of Virchow); and (2) those consisting of embryonic cells. (3) A third group is formed by the teratomata, which consist of more than one kind of tissue, and clearly represent portions of another individual." He adopts the following arrangement:—1. Type of higher tissues—myoma (muscle), neuroma (nerve), angioma (blood-vessels), lymphangioma (lymphatic vessels). 2. Type of fully-developed connective tissues—fibroma (fibrous tissue), myxoma (mucous tissue), lipoma (adipose tissue), chondroma (cartilage), osteoma (bone). 3. Type of embryonic connective tissues—the varieties of sarcoma. 4. Type of epithelial tissues—papilloma (growth of papillæ of the skin or the mucous membrane), adenoma and carcinoma (growth of glands), syncytioma (growth of fœtal membranes). 5. Teratomata, or congenital mixed tumours. This appears to be a sound, a comprehensive, and an intelligible arrangement,

although the author holds that "in our present state of ignorance, no satisfactory classification of tumours is possible."

The work is well illustrated. Among several new illustrations mention should be made of the diagram at page 152 (Fig. 83), which is designed to explain the phenomena of Wassermann's reaction as a test for syphilis.

It will be good news for medical students to learn that the price of this new "Green's Pathology" is fifteen shillings net, instead of eighteen shillings as heretofore. The modification of the *format* of the work allows it to be included in the well-known University Series of Manuals, which contains such popular volumes as Rose and Carless's "Surgery," Stewart's "Physiology," Monro's "Medicine," Jellett's "Midwifery," Buchanan's "Anatomy," and, last not least, Castellani's and Chalmers' "Manual of Tropical Medicine."

A Clinical Atlas of Sectional and Topographical Anatomy. By Richard J. A. Berry, M.D., F.R.C.S., Professor of Anatomy in the University of Melbourne. Edinburgh and London: Wm. Green & Sons. 1911.

Professor Berry has performed a real service to clinicians by providing them with this beautiful atlas of sectional anatomy. As he points out in the text, no similar work has been issued since the publication of Braune's Atlas, and as formalin has been introduced since the date of that work, it is now possible after frozen sections have thawed to maintain their form without the slightest difficulty. In consequence much more accurate reproductions of sections can now be obtained, more especially as the resources of modern photography render the anatomist practically independent of the draughtsman. The sections have almost all been cut along the planes suggested by Addison, as marking satisfactory surface lines for clinical and surface anatomy work. There are in all sixty coloured plates in the Atlas, the whole of the head and trunk being represented by series of transverse and vertical sections. We have studied carefully a large number of the plates, and can speak in the highest terms of the careful accuracy with which they have been produced.

They should prove of the highest value to both clinical teachers and general practitioners.

Cesare Lombroso: A Modern Man of Science. By HANS KURELLA, M.D. Translated from the German by M. EDEN PAUL, M.D. London: Rebman, Ltd. 1911. 8vo. Pp. vi + 194.

THE evolution of the Penal Code affords a study of great interest, not only to the historian of the Law, but also to every one who devotes any attention to the history of the social development of mankind. During the nineteenth century the treatment of the criminal underwent a very remarkable change, and it would seem as if the twentieth century were to be marked by a change no less remarkable.

The beginning of prison reform in England may be said to date from 1773, when John Howard was appointed Sheriff of Bedfordshire, which resulted in his great work towards the reform of the abuses of prisons and a more humane treatment of the criminals confined in them.

At first the work progressed but slowly, and was merely humanitarian in its object. The material condition of the criminal was to some extent improved, but for many years there was no change in the law which regulated his punishment. The law is eminently conservative, but even the law has changed, and how great has been the change may be gathered by any one who compares the penalities inflicted in the time of Dickens with those of the present day.

It would seem, however, as if this development on merely humanitarian lines has gone quite as far, if not further, than wisdom would direct, and in the future sentiment must be controlled by science. It is quite obvious that the corrective influence of legal punishments, though in some cases it regenerates the character of the punished, does not do so in all, and in many cases seems to fail altogether, or even to have a bad influence. The study of the criminal, then, comes to be an important factor in the case, and it is this study which seems to offer in the future the greatest prospect of further development.

It is in connection with his work in the study and development of criminal anthropology that Cesare Lombroso will be best remembered. Though there may be a difference of opinion as to the value of the results that Lombroso obtained there can, we think, be none as to the value of the stimulus he has given to the study of the subject—a study that is already bearing fruit. If one believes, as Lombroso always maintained, that "penal measures are the sole safeguard of social evolution," then it is of the highest importance that these measures should be guided by an accurate and scientific knowledge of the criminal and not merely swayed by the whims of sentiment.

Dr. Kurella has given us a most interesting account of Lombroso and his work—an account that is founded not only on an intimate knowledge of the man, but also on a long and close study of the subject, the elucidation of which was the chief life work of Lombroso. The book has thus the double interest of a biographical study of an interesting personality and an accurate presentation of one of the most interesting of the social problems of the day.

To the translator our thanks are due for giving this work to English readers, and for giving it too in excellent English.

An Introduction to Therapeutic Inoculation. By D. W. Carmalt Jones, M.D., M.R.C.P., Director of the Department of Bacterio-therapeutics, Westminster Hospital. London: Macmillan & Co. 1911.

The injection of vaccines for therapeutical purposes has long since ceased to be a method of treatment employed only by the select few, and has become a matter of everyday practice with up-to-date medical practitioners. It is extremely important, therefore, that means of obtaining a good general knowledge of the subject and its scientific foundations should be available. Such means are provided in the little book now before us, which gives in a simple but, nevertheless, complete form all that the general practitioner need know, at the present time, of the subject. What strikes one most, perhaps, in the book is the way in which the accumulated facts recorded

demonstrate the still experimental character of vaccine therapy. Without doubt brilliant results are sometimes obtained, but it is necessary to remember that vaccines will not cure everything, and that cases got well long before even the word vaccine had been invented.

The present book is divided into two parts, the first of which is entitled "Principles" and the second "Practice." Part I. deals with spontaneous recovery, bacteriological diagnosis, preparation of vaccines, and the history of therapeutic inoculation. Part II. gives a summary of the results hitherto obtained by the use of vaccines in various diseases. This second part forms a useful dictionary to which one may refer, and thus rapidly learn the experience of others in dealing with any disease that one may wish to tackle by vaccines. An appendix on the technique of determining the opsonic index may prove of use to those who are unable to learn the method by obtaining direct practical instruction.

Carbonic-Acid Snow as a Therapeutic Agent in the Treatment of Diseases of the Skin. By R. Cranston Low, M.B., F.R.C.P. Edinburgh and London: William Green & Sons. 1911. Demy 8vo. Pp. 117.

When any new treatment becomes popular and has attained a definite position amongst recognised therapeutic agencies, it is a matter of great convenience to the practitioner to have a standard book on the subject, in which the information, that could only otherwise be obtained by a tedious study of original papers, is collected and summarised. The present little book performs this important service in connection with the use of carbon dioxide snow as a remedy for diseases of the skin. It is extremely readable and sufficiently complete to fulfil its purpose. Its contents are divided into four main sections—the first deals with the technique of collecting and applying the snow, and describes the various methods that have been employed; the second describes the macroscopic, and the third the microscopic effects on the skin produced by the application of the snow; the last describes the therapeutic uses of the snow in all the conditions for which it has been

employed. The book is illustrated and nicely got up. We can recommend it to all who are interested in this method of treatment.

A Handbook of the Surgery of Children. By E. Kirmisson, Professor of the University of Paris ; Surgeon to the Hospital for Sick Children, &c. Translated by J. Keogh Murphy, M.C. (Cantab.), F.R.C.S., Surgeon, Miller General Hospital for South East London ; Senior Assistant Surgeon, Paddington Green Children's Hospital. Oxford University Press : Henry Frowde ; London : Hodder & Stoughton. 1910. Pp. 822.

"A Handbook of the Surgery of Children is a translation from the French of Professor E. Kirmisson's Précis de Chirurgie Infantile."

Comprehensive, as will be seen later, and well put together, Kirmisson's work contains an account of his own methods and teaching as derived from extended experience. Though, in the main, Kirmisson's ideas do not differ materially from those we find expressed in English text-books—perhaps, indeed, he is somewhat more conservative—yet the question is often viewed from a different standpoint, a circumstance that adds to the interest and value of a book which, in itself, is a sound one. An outstanding feature is the care and attention he pays to the details of manipulative and gymnastic methods of treatment, which, so successful when properly carried out, are usually not sufficiently described or emphasised.

The manual is divided into four parts. Part I.—"Surgical Affections of Congenital Origin"—deals with malformations, and occupies a third of the volume. The writer has taken considerable trouble to make clear such facts of embryology as are necessary to render the nature of the defects intelligible and their treatment rational. Plastic surgery and other operative procedures he describes with sufficient minuteness for the purpose. He discusses at some length club-foot and congenital dislocation of the hip.

Part II.—"Injuries of Childhood"—is taken up with fractures and dislocations, burns and foreign bodies. The

conclusions on traumatic separations of epiphyses are instructive and to the point.

The scope of Part III.—"Inflammatory Lesions and Disorders of Nutrition"—is varied and extensive. The section on "Disorders of the Locomotive Apparatus" alone fills nearly 300 pages, and includes chapters on osteomyelitis, tubercular and syphilitic disease of bones and joints, rickets and infantile paralysis. Section II. embraces middle ear disease, adenoids, abdominal, rectal, and urogenital surgery.

The whole of Part IV. is devoted to neoplasms.

The illustrations—473 in number—are quite in keeping with the practical nature of the treatise. A few have been introduced by the translator, Mr. J. Keogh Murphy, who has also contributed throughout many explanatory remarks and additional notes which will be found of decided advantage to the English reader. With the exception of a few obvious mistakes, too trivial for adverse comment, the translation is all that can be desired.

Modern Treatment. The Management of Disease with Medicinal and Non-Medicinal Remedies. In Contributions by American and Foreign Authorities. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica, Jefferson Medical College, Philadelphia; Physician to the Jefferson College Hospital; assisted by H. R. M. LANDIS, M.D., Director of the Clinical Department of the Phipps Institute, University of Pennsylvania, &c. London: Harry Kimpton; Glasgow: Alexander Stenhouse. 1911. In 2 Vols. Large 8vo. Illustrated. Vol. I. Pp. 930. Vol. II. Pp. 900.

THESE two volumes of about one thousand pages each consist of some fifty articles dealing with every province of medicine other than surgical ones. The lists of authors of the special articles include many well-known British, American, and foreign names. Besides, the scheme of the work differs widely from that of the ordinary text-books. The design of the Editor seems to be to focus attention on treatment, and the reader receives just enough information on the subjects of ætiology,

pathology and diagnosis as admits of his following the *rationale* of treatment adopted. The work is divided into sections, of which we have three in the first volume and ten in the second. The first section opens with an article by H. C. Wood, Junior, on "Modern Pharmacology and its bearing on Practical Therapeutics," in which the learned author's familiarity with all the modern views on the subject is manifest, and the reader gets an instructive and helpful article ; but Dr. Woods ignores the genesis of modern pharmacological knowledge, and the reader is left in ignorance of the splendid work of the Higginses, uncle and nephew, of Sligo ; the younger of whom demonstrated "the combination of chemical bodies in multiple proportions," and in 1797 drew attention to the anæsthetic properties of the alcohols of the $C_nH_{2n+2}O$ series, and foretold that a general anæsthetic would be produced from them.

To come to more modern times there is no mention of the wonderful work of Dr. R. Kane, afterwards Sir R. Kane, whose analysis of white precipitate was the starting point of the production of synthetic chemicals. And although British and Irish workers laid the foundations of the present superstructure of modern chemistry they receive no proper recognition—in truth no recognition in the article. Of vegetable products in modern use the article gives a helpful account, but still unsatisfying in many ways. We would like to know something of the men who did the spade work in this connection ; who sifted the chaff from the wheat. Of the unceasing labours of Gerarde and of his successor Johnson, of Cullen, and of the classic volumes of William Woodville : even Pareira is not honoured by acknowledgment. Each one of these writers is worthy of study to-day and each of them contributed largely to put the science of pharmacology on a firm basis. The influence of the physical form of non-organic substances is not dealt with by Dr. Woods, and yet it is both important and interesting, and is daily becoming of more and more pharmacological interest. Dr. Hemsberger writes a useful article on prescription writing ; but we fear that incompatible mixtures will continue to be written until candidates for examination are submitted to a careful practical and theoretical testing on chemistry. An article on the very interesting subject of the "Untoward Effects of Drugs"

follows, in which there is no mention of the fact that morphine sometimes produces purging and convulsions, as was long since pointed out by Dr. Guy ; this is all the more remarkable as it was pointedly referred to in the memorable trial of William Palmer, in May, 1856. We further think that Dr. Rudolf should have drawn attention to the fact that injections of cocaïne into the urethra have had lethal effects. There is now no excuse for omissions in medical articles of important facts when we can refer to the "Index Catalogue" the "Index-Medicus," and Neale's Digest. And in this case we think J. G. Milligan's "Curiosities of Medical Experience" might have been consulted with advantage. The second edition contains valuable articles on the hygienic measures necessary in the management of epidemics, and one on serum-therapy, which latter the author, Dr. W. H. Park, very properly considers as yet on its trial, and that it is probable it would have received but scant consideration had it not been for the remarkable success achieved by "antitoxin in the treatment of diphtheria." In the article on "Glandular Therapy" the thyroid gland occupies the greater space, it contains much readable but little new matter. We are, however, rather surprised to find the author stating "I have failed to see any case of well-defined myxœdema or cretinism restored to a completely normal condition by thyroid-therapy." Probably no diseased tissue is ever completely restored to its normal condition ; but in ordinary language a part is restored when it becomes functionally efficient ; and that there are numerous such cases of myxœdema the twenty-first volume of the Clinical Society's Transactions puts beyond doubt. But Dr. Zacke seems not to have heard of the work of the late Clinical Society in organotherapy.

Dr. Pottinger treats of tuberculin as a therapeutic agent, and his views on the subject may be understood from his conclusion :— "The practical therapeutic application of tuberculin in several hundred cases of tuberculosis during the past fifteen years has convinced me that it is a remedy of great value." The important article, "Nutrition and Food," is from the pen of Dr. Friedenwald, who classifies foods elaborately and gives lists of dietary, which latter should be useful for reference. But we cannot

agree with him on the value of rectal feeding, although von Leube's case and that of Riegel are known to us, Dr. W. Langdon Brown's paper on the subject in the "Proceedings of the Royal Society of Medicine" for April, 1911, has, we think, proved that the so called nutritive enemata are of no nutritive value.

Space will not admit of our dealing more fully with this great work, which brings the most modern therapeutis before the reader, and makes plain the principles which underlie modern treatment. We cannot, however, close without drawing attention to the articles—very valuable articles—on tropical diseases, notably on those dealing with yellow fever and plague; they should be most helpful to all physicians who purpose practising abroad: they are exhaustive and clear, and tell in every line the wonderful progress Medicine has made in the last twenty years.

The Life History, Function and Inflammation of the Appendix. An Address delivered to the Clinical Society of Manchester, January, 1911. By Edred M. Corner, M.A., M.B., F.R.C.S., Surgeon to the Surgical Isolation Wards and Out-Patients, St. Thomas's Hospital; Surgeon to In-Patients, Children's Hospital, Great Ormond St.; Consulting Surgeon to the Wood Green and Pusley Hospitals. London: John Bale, Sons & Danielsson, Ltd. 1911. Pp. 23.

In this interesting lecture, Mr. Corner describes the physical as differentiated from the physiological process of digestion, and compares the cæcum to the stomach, in that it forms the second resting place for the food stuffs in their passage through the alimentary canal. But unlike the stomach the contents are alkaline or very faintly acid, and therefore prove a very suitable medium for the growth of micro-organisms; the appendix, a vestigial and dying structure, has been made use of by nature and endowed with a secondary function, that of producing leucocytes in large numbers by its adenoid tissue to police and control the growth and action of these bacteria. The cæcum also is a common place for the lodgment of foreign bodies, and the author suggests the important connection between the outbreak and increase in the number of cases of

appendicitis occurring in America and the United Kingdom and the gradual extension of the disease from the richer to the poorer classes, and the introduction of the preparation of flour by big steel rollers of a fluted type, which rapidly wear out and are renewed. The material detached from the rollers must obviously be in the flour, and the particles lodge in the cæcum and appendix and cause irritation. The writer explains the fact that removal of a diseased appendix often seems to cure constipation, by suggesting that the peristalsis of the large intestine starts in the appendix, and when this organ is removed, the movements start in the healthy caput cæci instead of in the unhealthy appendix, and therefore become normal. He sounds a note of warning regarding the cases of what he calls "unconscious, undiagnosable, unrecognisable appendicitis," and concludes, "of recent years it has become the fashion to say that removal of the appendix is done too often. I maintain that this is not so, and think the appendix should be removed much more frequently than it is, particularly in middle life."

Clinical Lectures on the Acute Abdomen. By WILLIAM HENRY BATTLE, F.R.C.S., Surgeon to St. Thomas's Hospital, and Joint Lecturer on Systematic Surgery in the Medical School; Formerly Surgeon to the Royal Free Hospital; Assistant Surgeon to the East London Hospital for Children: Hunterian Professor of Surgery at the Royal College of Surgeons of England; "Orator" of the Medical Society of London, 1910. London: Constable & Co., Ltd. 1911. Demy 8vo. Pp. xi.+ 107.

THIS book of 93 pages consists of seven lectures on various causes of what the author calls "the acute abdomen." The first two deal with the appendix, its diseases and their treatment. Needless to say these are excellent, the author being such a well-recognised authority on this subject. Chapter III. deals with perforations of the various parts of the digestive tract, and is well illustrated with short histories of interesting cases. In Chapter IV. the subject of acute intestinal obstruction is considered in a clear and concise manner, special attention being drawn to the importance of

resection of a sufficiently large amount of gut in gangrenous cases to ensure a junction being made between healthy portions of the bowel. Chapter V. deals with some diseases of the female generative organs, giving rise to acute abdominal symptoms, as rupture of pyosalpinx, gonorrhœal peritonitis and extra-uterine gestation. In Chapter VI. the author discusses some of the rarer causes of the acute abdomen, as acute hæmorrhagic pancreatitis, acute dilatation of the stomach, of which he describes two varieties—toxic and post-operative, embolism and thrombosis of mesenteric vessels, and perforations and acute inflammation of the gall-bladder. The last chapter describes some neuroses which may cause symptoms of urgency, hysterical manifestations, hæmorrhage from the stomach, hysterical perforation and enterospasm. A useful synopsis and a good index are both provided, and the book will well repay the time spent in its perusal.

Medical Diseases of Children. By Reginald Miller, M.D. (Lond.), M.R.C.P., Physician to Paddington Green Children's Hospital. Bristol: John Wright & Son. 1911. Demy 8vo. Pp. xv + 541.

The line dividing surgical and medical diseases is sometimes so hard to define that the term "a medical disease" is often misleading and objectionable. When we have made this criticism, however, it must be allowed that there is little else in Dr. Miller's book to object to, and much to praise. The chief innovation he has made is the classification of the infectious diseases under the headings of their bacterial origin—thus he gives us the various pneumococcal infections under the head of pneumonia—and so on. In the case of children's diseases this plan—which is theoretically a sound one—seems to work out very well and to leave very little to be desired. It may be mentioned in this connection that Dr. Miller includes acute poliomyelitis definitely as an infective disease.

The section on infant feeding is particularly good. The author gives an excellent description of the various methods of modifying cows' milk, without going too much into the complexities of the percentage method. In fact for simplicity

and lucidity his description of the way to calculate any additional percentage of cream is unequalled. The chief fault in this chapter is that the section on breast feeding is all too short, and the reasons for the great benefit accruing to the child are not sufficiently explained or emphasised. The chapter on rickets and scurvy is also good. On no subject have there been so many dogmatic statements and contradictions, but Dr. Miller takes them all, with all the irreconcilable facts, and lays them before his readers, leaving them to form their own judgment. The value of this part of the book is greatly enhanced by the inclusion of the results of Budin's experiments, which form a strong argument for the benefit obtained by pasteurising and sterilising milk.

In conclusion it may be added that no expense has been spared in producing the book. It is printed on particularly heavy highly-glazed paper, and contains many excellent photographs.

Lateral Curvature of the Spine and Flat-Foot, and their Treatment by Exercises. By J. S. KELLETT-SMITH, F.R.C.S. (Eng.), Late Demonstrator of Anatomy at University College, Liverpool, &c. Bristol: John Wright & Sons, Ltd.: London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd., 1911. Pp. xii + 137.

THE author clearly describes the various causes of the occurrence of lateral curvatures, and at the same time points out the method of avoiding or remedying these causes. He then analyses the deformity and expends much ingenuity in explaining how the rotation of the bodies of the vertebræ occurs. It has always seemed to us that too much attention is paid to—and too much mystery made of—this part of the deformity, the small vertical size of the spinal arches compared with the greater size of the bodies is in our opinion quite sufficient to explain the rotation of the bodies of the vertebræ towards the convexity and the arches to the concavity. The author classifies cases into three grades:—(1) Those in which the spine may be straightened out to normal by posture: (2) those in which the spine may be straightened out to some

extent by posture; (3) those in which the deformity is so confirmed that radical changes in the shape of the ribs and vertebræ are palpable and in which the alteration produced by posture is inconsiderable. This is a very useful classification for clinical purposes. He describes very clearly the creeping exercises derived by Professor Rudolf Klapp, and explains their action on the vertebral column. He describes also various other exercises which will be found very useful in the treatment of these cases. Chapter VIII. deals with weak-ankles and flat-foot, and the author draws a distinction between these two conditions, defining the former as a condition in which the ankle-joint is loosely held together as a result of a lax state of the structures supporting it, and so lends itself to exaggeration of its normal movements. The author draws attention to the abduction of the anterior portion of the foot which accompanies flat-foot, and which brings the axis of weight bearing of the body through the first toe, or even internal to it instead of through the third as it normally does, in this way the weight is borne by the inner or highly-arched side of the foot, and, consequently, this arch tends further to give way and the flattening is exaggerated. This at once points to the most important element in treatment of these cases—*i.e.*, the throwing of the weight on to the outside of the foot, this may be obtained by raising the inner side of the foot by additions to the heel and sole along the inner border, and by making the patient walk with the foot straight or slightly turned in. In chapter nine various useful exercises for this condition are described. The book is well got up and illustrated, and we can strongly recommend it not only to those who confine their attentions to orthopædic work, but to all general practitioners.

Transactions of the American Urological Association. Edited by Charles Greene Cumston, M.D., Brookline, Mass.: The Riverdale Press. 1911. 8vo. Pp. vi + 263.

The fourth volume of the Transactions of the American Urological Association contains a large amount of interesting matter; the subjects dealt with are entirely urological, but

this branch of surgery is so extensive that plenty of variety will be found in the book.

Urology, a subject still in its infancy, is constantly finding new facts, and new interpretations of old ones; this account of the Association's ninth annual meeting contains much that is new, and indeed some things that require further information before they can be accepted as true.

Articles on "the small fibrous prostate" and "recent developments in pyelography" are specially worthy of close attention.

The full report of the discussion following each paper, and the number and excellence of the illustrations greatly enhance the value of the book.

Modern Methods of Water Purification. By John Don, F.I.C., A.M.I.Mech.E., and John Chisholm, A.M.I.Mech.E. London: Arnold. 1911. 8vo. Pp. xvi + 368.

The title of this work is far from indicating the full scope of its contents. It deals in an exhaustive manner not only with the actual methods, but also with the various problems arising out of the necessity for providing pure water to the vast urban populations of our modern civilisation. The methods dealt with are briefly as follows. As the first and simplest comes storage in reservoirs. Here we find the pathogenic bacilli rapidly disappearing, so that, as the result of Houston's researches, it would appear that after a week there still survives only one out of every thousand typhoid bacilli originally introduced, whilst in no case could the bacillus be discovered after the lapse of eight weeks. After three weeks' storage the danger from this source must be practically non-existent. This change from a potentially dangerous to a reliably innocuous condition may be termed the "safety" change, and if it could be certain that all the water in the reservoir were really stored for that length of time, and that no short circuiting between inlet and outlet were possible, the necessity for subsequent filtration would be largely superseded. What is true of typhoid holds good *à fortiori* of its more sensitive pathogenic brother the vibrio of cholera, whilst the hardier

sewage germ *B. coli* also undergoes enormous reduction, together with an alteration of its culture-reactions, so that it becomes less "typical." *En passant* it may be noted as a curious fact that this alteration of type undergone by *B. coli* under the influence of storage tends to make that germ more closely resemble the pathogenic typhoid. The negative indol reaction is mentioned by our authors, but they might also have added a number of other distinctions which break down under the conditions of storage, such as ability to ferment lactose, to change the colour of neutral red, &c. It would be a matter of great interest to ascertain whether the disappearance of these saprophytic characters in the stored and altered *B. coli* were accompanied by an assumption of pathogenic powers. Some animal experimentation on this point seems called for in the immediate future.

The chemical changes which go on in stored water, affecting the amount of oxidised and unoxidised nitrogen, are lucidly discussed, and the general conclusion is drawn that there is a well marked decrease of ordinary ammonia, whilst the albuminoid N is not affected to the same extent. The oxidised nitrogen and oxygen consumed are also diminished.

Water-managers are often troubled by growths of algæ in their reservoirs. We find the addition of a small trace—one part in a million—of copper sulphate recommended as a cure for this unpleasant phenomenon. As little as one part of the copper in ten millions is "algicidal," and, as in other cases, it is better to add it prophylactically at the season when the growths begin, on the principal that "prevention is better than cure." It does not appear that the minute trace of copper which still persists in the effluent exercises any prejudicial effect on the health of the consumer, yet Rideal prefers to use chlorine in the form of bleaching lime.

The leading chapters in the book are undoubtedly those on sand-filtration. The rationale of the process, its effect on solids in suspension and solution, its power of arresting bacteria, and the limitations of that power, are fully discussed in the light of the most recent work, both British and foreign. The water-manager will here find the most valuable practical information collected from sources otherwise inaccessable to

him, regarding the size of the sand to be used, the best depth of the beds, the best rate of percolation, the value of the slimy film, and the possibility of conducting the filtering process in its complete absence. This leads up to the discussion of the modern "Mechanical Filters," in which this living film is dispensed with, such as the "Mather and Platt," the "Candy," and the "Turn Over" processes, with and without the prior addition of coagulants. Next we find the sterilisation of water by means of ozone described, and then come the various methods of water-softening and household-filtration on the small scale by means of Berkefeld and other germ-tight filters.

Due prominence is given in the following chapter to bacteriological methods as the most definite means we possess of estimating the precise amount of purification effected. The account given of them is fairly good as far as it goes, but does not convey the impression of personal familiarity with the procedures described. As an example of an important omission, we have failed to find any mention of the method of testing for *B. coli* by adding measured volumes of the sample to M'Conkey's fluid (double or even treble strength for the larger amounts of water) in tubes or flasks containing an inner fermentation-tube.

The difficult question of bacteriological standards and the interpretation of the *varieties* of organisms found in potable waters (as worked out in Germany by Migula and by Mez) do not seem to have received adequate attention at the hands of the writers, nor do we find the question as to the permissible proportion of blood-heat to room-temperature germs discussed. The same remarks apply—though not to the same extent—to the way in which the writers deal with the chemical tests for water.

Novel and interesting information is given in connection with standards of turbidity "turbidimeters," and the application of testing the electric conductivity of waters. The various sorts of microscopic organisms constituting the "plankton" of our reservoirs are briefly described and many of the more important forms are depicted, though we miss all reference to what appears to the hygienist the most important point—the inferences as to probable contamination to

be drawn from the presence of certain forms or certain groups. It would, for instance, have been well to refer to such facts as that Infusoria are "gross feeders," and point, when present in swarms, to the presence of much organic matter, and that certain genera of blue-green algæ (*Oscillatoria*) are almost pathognomonic of sewage pollution. Problems of distribution come next, including a most excellent discussion of the question of Plumbo-solvency.

In conclusion, we can heartily recommend this book as the fullest and most up-to-date account in a moderate compass (360 pages) of the important subject with which it deals. It ought to be in the hands of every water-manager in the Kingdom.

Cystoscopy as Adjuvant in Surgery. By Staff-Surgeon Dr. O. Rumpel. Only Authorised English Translation by P. W. Shedd, M.D., New York. London: Rebman. 1911. Large Cr. Quarto. Pp. 131.

Messrs. Rebman have brought out an edition of Dr. Rumpel's "Cystoskopie im Dienste der Chirurgie," translated by Dr. P. W. Shedd, of New York.

The Introduction deals with some of the more common abnormalities and pathological conditions which may be discovered or diagnosticated by means of the Cystoscope, and is followed by an Atlas with 85 illustrations. The book does not pretend to be a handbook of Cystoscopy, and so the text does not supply much new or suggestive information, but rather explains to the novice what he may expect to see when employing this aid to diagnosis.

Unlike the German original the American text is full of classical and pseudoclassical terms, such as—"labioid," "pediculous," "spheric," "sugillations," "trabeculated," "diverticuloid," "disintegrant;" while "in particulate," "unitary" (for single), "apt" (for probable), "intensive" (for intense), "difficultly," "carefullest," "descendent" and "dependable," can seldom be found in classical English. "Uretral," which is generally used of the upper "uriniferous" passages replaces uretbral on the one occasion when the adjective for the lower

part of the "uropoietic system" is employed, and other misprints and omissions of words are numerous. On page 19 the translator follows the original not only in describing a case of right Renal Tuberculosis, but in referring to Plate IX., where the condition is attributed to the left side.

With regard to other peculiarities of diction and style which trip up the reader at frequent intervals and render a lexicon and dictionary almost indispensable, it will perhaps be better to follow the example of the patient who "remains garbed in silence" when asked to account for "less familiar addenda to the economy" than needles, thread, nails and straw, and merely add that the illustrations which have been transferred (not translated) directly from the original drawings are as nearly perfect as it is possible to make them, and that the book is brought out in a style which reflects the greatest credit on the publishers.

St. Luke's Hospital Medical and Surgical Reports. Vol. II. 1910. Poughkeepsie, N.Y.: Frank B. Howard. Pp. xi + 253.

THE Second Volume of Reports has now been published by St. Luke's Hospital. It contains numerous articles of great interest, both medical and surgical. Many of the cases described are accompanied by excellent illustrations, of which, perhaps, the best are the cystoscopic views which form the frontispiece. It would be invidious to single out from a collection of such merit any one article for special comment, and would besides deprive the reader of the pleasure he will experience in dipping into this work.

Practical Cystoscopy. By PAUL W. PILCHER, A.M., M.D. Philadelphia and London: W. B. Saunders & Co. 1911. 8vo. Pp. 398.

VERY few complete works have been published in English on the subject of cystoscopy. Pilcher's book of over 300 pages, with a large number of excellent illustrations, is a very welcome addition to the list. The book is divided into seven parts dealing with:—(1) The technique of cystoscopy: (2) the

diseased bladder; (3) diseases of the prostate; (4) diseases of the ureter; (5) the functional activity of the kidneys; (6) diseases of the kidney; (7) therapeutic uses of cystoscopy. From this list it is easily seen that the volume is most comprehensive.

Parts 2, 3, 4, and 6 are admirably dealt with, information is given in the clearest possible manner, and is thoroughly up to date. Sections 5 and 7 are both too brief, the subjects are worthy of a much greater amount of space than Dr. Pilcher has seen fit to bestow on them. This is annoying, as much space is wasted in the first 80 pages of the book; the detailed description of various cystoscopes given there is quite unnecessary in any work but an instrument maker's catalogue.

Apart from this, we have nothing but praise for the book. The illustrations are beautifully done, both drawing and colouring being very true to life, and in the teaching of such a subject as cystoscopy are very valuable, and make this a work no urinary surgeon can afford to be without.

Practical Forensic Medicine: a Police-Surgeon's Emergency Guide. By C. Graham Grant, L.R.C.P. & S. (Edin.), V.D., Lt.-Col. R. A. M. C. (T), Barrister-at-Law (Gray's Inn); Divisional Surgeon, H. and Thames Divisions, Metropolitan Police; Surgeon Poplar Hospital, &c. Second Edition. London: H. K. Lewis. 1911. F'cap. 8vo. Pp. viii + 90.

Colonel Graham Grant brings exceptional qualifications to bear on the writing of this eminently practical Police-Surgeon's Emergency Guide. A registered medical practitioner, a barrister-at-law, and a member of the territorial branch of the Royal Army Medical Corps, the author has enjoyed unusual facilities for mastering the many-sided subject of Forensic Medicine.

"This little book," as Colonel Grant modestly calls it, is of handy size, so that it "may rest unseen in the pocket" until such time as its owner requires to consult its pages, replete as they are with information. It is written in unconventional English, in fact in a colloquial style, which will help the reader's memory.

In the otherwise excellent section on Poisoning (page 68 to 77) we notice one slip—under the heading "Rat Poison" it is stated that "they are all irritants, and are, therefore, properly treated with the stomach-tube or emetics and *oil*." But "when you are informed 'rat poison has been taken,' you may have strychnine, arsenic and phosphorus to deal with, either separately or combined." In a sentence which precedes this paragraph we read: "The stomach-tube and emetics, followed by olive oil and water, is the treatment, except in phosphorus poisoning, when no oil should be given"—a statement which is, of course, correct.

A short section on "Fees" by Mr. Herbert Austin, B.L., taxing-master in the Central Criminal Court, is a useful addition.

The second edition has been revised, corrected, and brought up to date, with the kind assistance of Dr. F. J. Smith, Editor of "Taylor's Medical Jurisprudence."

What Shall I Eat? A Manual of Rational Feeding. By DR. F. X. GOURAUD. Translated by FRANCIS J. REBMAN. London: Rebman, Ltd. 1911. Cr. 8vo. Pp. xix + 379.

THE transition of many students from the nursery of hospital to the active life of general practice is in rapidity like that of chrysalis to butterfly. To the wise, or those whose circumstances are easy, the shock may be lessened and the weaning made more gradual, but to many the routine and readily accessible help in hospital—often disparaged aids—only appeal forcibly when completely out of reach. To all such parasites suddenly bereft of their accustomed host—using the words in their biological sense—this book of Dr. Gouraud's will appeal very strongly, for it deals fully with the question that most frequently baffles the young practitioner in treatment. The medical man must, among other things, have an intelligent knowledge of the values of food stuffs and their use in disease, as he will then be frequently able to gratify the personal tastes of his patients by including in the diet harmless luxuries.

In "What Shall I Eat?" the author gives for each article

of food its actions on the digestive functions, on assimilation, secretion and elimination. The indications and contra-indications are fully mentioned; there are two indexes for diseases and foods, with the result that the book is both scientifically complete and also convenient for reference. Further, there is an originality of thought as well as ability that will make the book of value to everyone interested in the subject. We would particularly call attention to the interesting chapters on stimulants and vegetarianism.

RECENT WORKS ON MIDWIFERY AND GYNÆCOLOGY.

1. *Vaginal Celiotomy.* By S. Willis Bandler, M.D., Fellow of the American Association of Obstetricians and Gynecologists; Adjunct Professor of Diseases of Women, New York Postgraduate Medical School and Hospital; Associate Attending Gynecologist to the Beth Israel Hospital, New York City. With 148 Original Illustrations. Philadelphia and London: W. B. Saunders Co. 1911. Large 8vo. Pp. 459.

2. *Cæsarean Section in Great Britain and Ireland.* With Tables of 1,282 Cases of Cæsarean Section by over 100 Living Obstetricians and Gynæcologists in Great Britain and Ireland. By Amand Routh, M.D. Lond., F.R.C.P. Lond.; Obstetric Physician to Charing Cross Hospital, London, and Consulting Physician to Samaritan Free Hospital for Women, London. Manchester: Sherratt & Hughes. 1911. Large 8vo. Pp. 233.

3. *Transactions of the American Gynecological Society.* Vol. 35, for the year 1910. Pp. i to lxii and 1 to 566. Wm. J. Dornan. 1910.

1. Dr. Bandler's work is scarcely accurately described by the title "Vaginal Cœliotomy," since, although it is mainly devoted to the description of operations which necessitated the performance of vaginal cœliotomy, it also contains descriptions of others—*e.g.*, perinæorrhaphy, which have nothing to say to vaginal cœliotomy. With this small criticism we can

only speak in favour of it. It gives a very clear account of almost all the different operations performed through vaginal cœliotomy openings, and is most profusely illustrated. The descriptions of the different operations recommended for the radical cure of prolapse of the uterus is specially good, though we should have liked a clearer description of Wertheim's interposition operation, and also a description of the different operations whose aim is the shortening of the utero-sacral ligaments. The book will be found of value by all gynæcological specialists.

2. Dr. Amand Routh deserves, and will certainly receive, the grateful thanks of his obstetrical confrères for the very great care and labour which he has devoted to his task of describing the history and present position of Cæsarean Section in Great Britain and Ireland. The simple tabulation of the 1,282 cases of this operation constitutes a great task in itself, and when to that is added the task of collecting these cases, and grouping them according to the indications which lead to the operation in each case, it is manifest that its magnitude is very much increased. Special mention is made throughout the book of the different opinions of individual operators on the various points which may still be regarded more or less as matters of opinion such as the various details of the operation, and its indications. Special sections have been devoted to the operation of vaginal Cæsarean section.

The entire work is a most valuable record of progress, and cannot fail to have attracted the attention of the gynæcological world at the V-me Congrès International d'Obstétrique et de Gynécologie at St. Petersburg, at which it was read in September of last year.

3. The thirty-fifth volume of Transactions of the American Gynæcological Society fully mantains the reputation of the Society, and is representative of the best of American gynæcology. Amongst the many important communications published in it are articles by Whitridge Williams on pubiotomy, by Polk and Vineberg on puerperal sepsis, by Blake and Reynolds on ptoses and their relation to neura-

sthenia, and by Cushing on the use of vaccines in septic conditions. In addition to these there are many others of extreme interest and value.

The volume constitutes a most valuable addition to any gynæcological library.

The Modern View of Syphilis and its Treatment. By Gustav Baar, M.D. (Vienna); Member German Congress for Internal Medicine; Member American Medical Association, &c. New York and London: D. Appleton & Co. 1910. Cr. 8vo. Pp. xii + 258.

"The Modern View of Syphilis and its Treatment," by Gustav Baar, M.D. (Vienna), is a work which owes its conception to a laudable desire on the part of its author to direct the attention of medical practitioners to the best means of examining obscure cases and identifying them with their true cause, that of syphilis.

The book is divided into three parts—one on the Bacteriology of Syphilis; the Diagnostic and Therapeutic value of the Wassermann Test; another part of the volume is entitled "Therapy," and describes the local and general treatment of the disease.

The most important portion, Part II., deals with the special therapy, symptomatology, and differential diagnosis of syphilis. This portion of the volume is amply illustrated with records of cases occurring in Dr. Baar's practice.

The book was published in 1910, and does not include salvarsan amongst the list of drugs available for the treatment of syphilis. On this account the work can hardly be considered as being modern and up to date.

In the author's description of the pathology, symptoms, and differential diagnosis of syphilis he follows the lines taught by his illustrious teacher, the late Professor Neumann, of Vienna. The text is replete with sentences printed in italics, and these convey the idea of being quotations or notes of terse statements made by Dr. Baar's teacher. For example, we read in italics such sentences

as "Whenever we see ptosis, we think first of brain syphilis," and, again, that "Three-fourths of all oculo-motor paralyses are of syphilitic origin." This style reminds us of Sir Jonathan Hutchinson's "Syphilis," and helps to impress the essential principles of the work on the reader's mind. The book also contains a bibliography extending over five pages.

In conclusion, we can recommend the volume to all those who are inclined to forget the old dogma of the British Schools of Medicine, that "when in doubt as to diagnosis think of syphilis (and tubercle) as the possible cause of the condition present."

S. S.

The Irish Motor Directory and Motor Annual, 1911-12. A Reference Hand-book for Motorists. Edited by HENRY G. TEMPEST. Dublin and Dundalk: W. Tempest, Dundalgan Press. 1911. Pp. 396.

WE have received a copy of this Irish Motor Annual, which contains much information in handy form, and should prove useful to all medical and non-medical motorists. The legal section of the book is particularly useful, summarising as it does all the law that bears upon the subject of motoring. A series of specially-written articles by well-known motorists and aviators will appeal to all kinds of motorists, scientific and otherwise. Many of the articles are humorous, while others deal with such subjects as "The Road Question," "A Mathematician's Views on Aviation," &c. The Directory is very conveniently planned, the names being arranged in alphabetical order under the counties and county boroughs in which the car or cars are registered. By reference to it the owner of any car registered in Ireland can readily be ascertained.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—Sir Charles Ball, M.D., F.R.C.S.I.
General Secretary—J. A. Scott, M.D., F.R.C.S.I.

SECTION OF SURGERY.

President—R. H. Woods, F.R.C.S.I.
Sectional Secretary—A. J. Blayney, F.R.C.S.I.

Friday, November 18, 1910.

The President in the Chair.

Transperitoneal Cystotomy, with Report of a Case.

Mr. Seton Pringle read a paper in which he gave a history of this operation, and compared the results obtained by it with those obtained by operating by the suprapubic route. He advocated this method in all cases of tumour, except those situated at the apex of the bladder. He described the operative technique in detail, and illustrated the various steps by lantern slides. The paper concluded with a report of a case of papilloma successfully dealt with by this route by the author.

The Secretary said that he had used the method twice, and he could confirm what Mr. Pringle had said with regard to the excellent view of the bladder obtained—the whole of the interior was quite under the eye, and anything necessary to be removed could be removed with great ease. The after-treatment he had used was to drain the bladder for a few days, and afterwards water was passed quite readily.

Mr. Jameson Johnston said the operation appealed to him as being scientific, and based on anatomical principles,

and one certain to be very useful in the future. He was not clear as to whether Mr. Pringle wished the method to be employed in every case of tumour of the bladder. He had operated on two cases of benign papilloma of the bladder in the last five or six years. Both were exactly alike, and the pedicle was not very thick. He opened over the pubes, and was able to see quite sufficiently to ligature the pedicle, to snip through the base of the tumours, and to remove them entire. Both tumours were the size of a hen's egg, but when put into formalin they got very considerably smaller. Both patients are alive and in perfect health, and have had no subsequent trouble. They left the hospital ten days after the operation. He would not use the transperitoneal method unless he thought the other method was not sufficient.

Mr. C. A. Ball said he had attempted to do transperitoneal cystotomy in the case of a man, aged fifty-six, who had a malignant tumour about the size of a five shilling piece involving the left ureter. As it was obvious that an extensive resection of the bladder with the orifice of the ureter would be necessary, he proceeded to carry out the operation described. On opening the abdomen it was found that there was a mass of secondary growth completely adherent to the iliac vessels. The case was therefore inoperable, and the abdomen was closed. The patient was able to return home, but subsequently required a suprapubic drain. He was, however, much struck with the splendid access to the bladder that was obtained. Another important point was that one was able to find the secondary growth, which by the older suprapubic method would have been overlooked. In a second case of a woman with a small malignant tumour near the ureter, but free from it, he carried out the operation. Although in a thin patient it was one of great ease, in a woman of sixty-five with an enormous abdomen the depth at which one was working rendered the operation a matter of difficulty. He did not gather whether Mr. Pringle had used the valuable aid of the electric head-lamp which had been brought to his notice by the President. With the head-lamp one was able to work with a smaller incision in the bladder, and the interior was readily illuminated.

Mr. Wheeler said that he had been impressed with

Mr. Pringle's work, and on his advice had used the transperitoneal method in an unusual case. The patient, a man about thirty-two, had hæmaturia, bleeding at the end of micturition, and sometimes bleeding independently. Examination by cystoscope showed a clot of blood over the orifice of the left ureter, thought to be gathering over a villous tumour. When the bladder was opened there was no sign of any villous tumour, but, in a small pouch above the ureter, there were some varicose veins, which bled into the pouch. They mopped out the bladder and cauterised the region thus affected. The operation had such great advantages over the ordinary suprapubic method that he would be inclined to use it in every case of tumour of the bladder where there was any difficulty in the removal of the tumour. He thought a head-light should always be at hand, but its use would depend on the kind of light available at the time of the operation. In his case he stitched up the abdomen without drainage. The patient passed water every hour in the first few days. The operation had been performed only a fortnight ago, and the patient was going on all right.

Mr. Gunn asked if Mr. Pringle meant that the operation was to be done in all bladder cases, or only in carcinoma. Perhaps the most important point, he thought, was that of the thick or thin patient raised by Mr. Ball. In the thin patient they could get an extremely good view with a suprapubic incision, but not in a fat patient. He had operated on eight cases of malignant growth in the bladder. Two were for drainage purposes. In one of the cases he had not recognised malignancy before the operation, and found the growth too late to do anything. In two cases he did the transperitoneal operation, and in one case had to replant the ureter higher up in the bladder wall. The patient died five days after the operation. The second survived the operation, but died of recurrence five months afterwards. In four cases of radical suprapubic operation, one died twelve months later, one died in nine months, one was still alive three years after the operation, and another four years. One should adopt whatever method was most convenient to get at the growth. No matter how carefully they sutured, there was a danger in the transperitoneal method of leakage of urine, and of hæmorrhage occurring, and if that occurred it was apt to choke the drainage tube, and to cause distension which would give trouble.

The President said that, in his opinion, no cavity operation could be as well done without an electric head-lamp as with it, but for the purpose they must have a theatre that was not too highly lighted. In his judgment, the mistake made in all operating theatres of his acquaintance, with one or two special exceptions, was that they were too highly lighted. For the purposes of surgery, where they wanted to see detail, too much light was just as disadvantageous as too little. If they had a subdued light, sufficient to enable the assistants to do their work, and others to see what they wanted to see, and they used a suitable lamp, with a large concave reflector that could be varied, he was of opinion that, no matter what the operation was in a cavity, they would be able to see ever so much better, and they would never go back to the old plan that compelled them to put their head between a light and the cavity.

Mr. Pringle, in reply, said he did not advocate the operation for all tumours. He thought it had not been done often enough to be quite sure of its mortality. He was inclined to advocate it in all cases except those of tumour situated near the apex of the bladder. One would think that with the transperitoneal operation, even with the risk mentioned by Mr. Gunn, they should have a less mortality than the immediate mortality of 10 per cent. with the suprapubic method. One could form a fair idea of malignancy with the cystoscope, but it was not sure, and the transperitoneal method enabled them to deal much more radically and rapidly with the tumour. He had good light in his case, and he thought the chief point was to get the patient into a very high Trendelenberg position, so that he was almost vertical, and the light of the theatre window shining in. He did not personally feel the need of a head-light. As regards the risk of the operation, a great many of the twenty-three cases reported by him, from American literature, were septic bladders. Richardson, in America, had taken out two large stones in two cases in which the bladder had tightly contracted down. He did the transperitoneal operation in both cases, the bladder being intensely septic, and both recovered without peritonitis.

X-rays in the Diagnosis of Urinary Calculi.

Mr. Maurice Hayes, in his paper, laid special stress on the necessity for thorough evacuation of the intestines in order to

sity for thorough evacuation of the intestines in order to obtain a satisfactory radiogram. A description of a simple method of obtaining compression of the kidneys by means of an ordinary girth was given. The various causes to which errors in diagnosis may be due were discussed, and radiograms illustrative of these were shown. The use of radiography as the only method of diagnosis of calculi was not recommended, but taken in conjunction with the ordinary methods of diagnosis it furnished more valuable information than could be obtained in any other way.

Mr. Haughton said there was no department of X-ray work more difficult to work out than that connected with renal calculi, and the skiagrams reflected great credit on Mr. Hayes. He did not think that X-rays should be used to replace the ordinary methods of clinical examination, but rather to confirm them. He had never known a Röntgen picture to make a mistake with regard to a stone in the kidney. The first thirty-two cases which he examined for stone with X-rays gave no shadow, and the cases which were operated upon proved the X-rays to be correct. With regard to controlling the respiratory movement of the kidney, the strap mentioned was an admirable addition to the work. There were other methods of extreme usefulness. The best was the diaphragm compressor of Albers-Schönberg, in which a cylinder of lead was gently but persistently squeezed into the abdominal wall. Mr. Mackenzie Davidson placed the patient lying on his face on a large soft cushion of feathers, which gave an idea of comfort, and squeezed the viscera flat towards the spine. The examination was made with the tube underneath the couch. However, the method advanced by Mr. Hayes might prove quite as good as either of those he had mentioned.

Sir John Lentaigne said that Mr. Hayes, unlike many demonstrators, had hardly done himself justice in explaining an error in diagnosis. He (Sir John) considered that an abscess cavity, shut off, and containing semi-fluid, gritty matter, could not be called anything else but a stone in the course of formation, and should give a shadow if any stony material gave one. That was the condition in the case in which he had operated, and there was no mistake. Mr. Hayes had X-rayed a case several years ago, when apparatus was not so perfect. He demonstrated clearly three small

stones—little larger than beans—in the kidney, when the patient complained of pain and trouble on the opposite side. Owing to his diagnosis the stones were successfully found and removed, and the patient completely cured. The same result in other cases reflected great credit on Mr. Hayes and radiography. He joined in impressing the importance of not undervaluing the old methods. The X-rays were so valuable a help that one was tempted to drop the more laborious methods of diagnosis. In the case to which Mr. Hayes alluded the tubercle which was found in the kidney was not recognised before the operation. No tubercle bacilli were found in the urine. The X-rays certainly did lead them to think it was a stone, but without the X-rays the patient could not have been operated on at all, because of symptoms in the kidney there were none until the X-rays showed the shadows.

Mr. Hayes, in reply, said he was prompted to write the paper by the difficulty of radiographers being sent hurriedly to examine cases. Surgeons ought to realise that thorough examination was necessary. He had invested so much in apparatus that he was afraid to put fifteen or sixteen pounds into the Albers-Schönberg compressor. He thought it was a cumbrous and heavy affair, and putting a patient in it was like preparing him for execution by guillotine. It was, of course, excellent, but everything could be obtained by a simple contrivance at an expense of 3s. 6d. He had recently used a rubber air-pillow, and found that he got the shadow of the air-pillow transversely on the plate. He does the work from underneath the couch. It had the advantage that they could see beforehand if the tube was in position. One disadvantage of the air-pillow was that the position of the patient changed during exposure. He had selected the plates as showing the errors that one might likely fall into.

Diagnosis of Renal Calculus.

Mr. Gunn read a short paper on the diagnosis of renal calculus, giving briefly the chief symptoms and the relative values of such symptoms in diagnosticating renal calculus. Mr. Gunn then discussed the question of how far the opinion of the radiographer should influence the surgeon in his treatment of the patient.

Dr. Harvey supplemented Mr. Gunn's paper with a few

remarks on the X-ray diagnosis of renal calculi. He agreed with Mr. Gunn that the radiographer should examine the whole urinary tract. Compression should be used in the kidney region, and the tube employed should not be unduly "soft" nor yet very "hard." Preparation of the patient by purgatives, &c., was essential. Positive evidence from a radiograph was of the highest value. Shadows in the kidney region not caused by stone could generally be differentiated without much trouble. It was possible, but very rare, that the best negative might show no shadow where a calculus was present. In the great majority of cases a negative diagnosis was justified by the absence of a shadow in a sufficiently good negative. Such a negative should show (1) the last ribs; (2) the tips of the transverse processes; (3) the line of the ilio-psoas muscle; and (4) the outline of the lower pole of the kidney. He (Dr. Harvey) then showed some lantern slides illustrative of these points.

Mr. Haughton said he was entirely in sympathy with Mr. Gunn in the way in which he put the four possibilities attaching to the photograph of a stone in the kidney, more especially when doubt existed. If there was any doubt they should repeat the photograph some time later. But a quicker and more satisfactory way was to take a stereoscopic picture by Mackenzie Davidson's method. It was astonishing how two rather indifferent negatives would yield an excellent stereoscopic result. Once they got the proportions and perspective they could be quite certain as to the anatomical relations and the plane in which the suspected shadow lay. The question of including the opposite kidney was most important. He had come across patients in whom the pain was referred to one side, and there were two large stones in the opposite kidney.

Mr. Stokes said they could get the symptoms of stone from a hypernephroma. Most of these were not diagnosticated until too late. Cases reported showed the surgeon practically certain of stone. If the radiographer took two photographs and found no stone, were they to sit down and let the patient die?

Mr. Pringle said he recently had a case, in which Mr. Gunn was associated, of a man who had an attack of renal colic ten years ago. He had another some months ago. Dr. Lumsden had had the kidney photographed before sending

the case on. The photograph was negative; but on account of the very typical attack of colic he decided to use the cystoscope, and they saw the orifice of the right ureter was distinctly congested. The catheter met an obstruction two and a half inches up. Sharp pain was felt, and he said the probability was that the stone was at the lower end of the ureter. A second photograph showed the stone there. At the operation they found the stone in the suspected position, and the ureter above the stone was greatly dilated, showing that the stone had probably being in the lower part of the ureter as a latent stone for ten years.

Mr. Hayes said that in a case described by Mr. William Taylor of hypernephroma a man expectorated a large amount of pus for some time. He was asked to radiograph, and the negative showed nothing but a dark shadow, which they could not make out. Mr. Taylor examined with the screen. The condition of the lung was very manifest. The dark shadow was continuous. A very large kidney was subsequently removed, and it proved to be a hypernephroma. He thought the X-ray fortified Mr. Taylor in his decision. The original idea was, he thought, that it was a sub-diaphragmatic or a liver abscess. The X-ray showed the liver was not at fault. The man was at present alive and well.

Mr. Gunn, in reply, said he did not attempt to deal with the differential diagnosis. What Mr. Stokes said was perfectly true. There were other conditions which made it difficult, but time would not permit their discussion.

Mr. Harvey also replied.

SECTION OF PATHOLOGY.

President—A. H. Benson, M.B., F.R.C.S.I.
Sectional Secretary—W. Boxwell, M.B., F.R.C.P.I.

Friday, January 13, 1911.

Bacillus Paratyphosus B. as an Accidental Post-mortem Finding.

Professor E. J. McWeeney read a paper on this subject, illustrated by numerous cultures and lantern slides. The case was that of a man, aged thirty-four, who died of puru-

lent peritonitis, for which no cause could be found *post-mortem*. There was neither ulcer nor perforation of the intestine. The peritoneal exudate yielded *Staphylococcus albus* only. The heart-blood and spleen yielded the bacillus now described, in pure culture. Morphologically and culturally it was a typical Paratyphosus B. save for its "weak" behaviour on media containing dulcite and arabinose from which it produced gas slowly and in small amount as compared with a genuine strain. The serum reactions had been very kindly tested by Dr. Bainbridge, of the Lister Institute, who found that it was agglutinated by Paratyphosus B. serum up to a dilution of 1 in 10,000. There could be hardly any doubt, therefore, as to its identity. As to the mode by which it had obtained access to the heart-blood, Professor McWeeney referred to several cases in which this bacillus had been isolated from the stools of apparently healthy persons. Numerous "carrier" cases that continued to harbour the bacillus for months or years after recovery from paratyphoid had also been recorded. He was inclined to suppose that shortly before death the bacillus had migrated from the intestine into the blood. Unfortunately the contents of the bowel were not examined. The paper concluded with a description of the position of the paratyphoid bacilli "A." and "B." in the typho-coli group. The speaker was inclined to the view that between the Shiga bacillus of dysentery, on the one hand, and the saccharose-fermenting races of *B. coli*, on the other, there was an unbroken chain of intermediate forms, distinguishable by their fermentative activities. Even within the limits of a single colony, in certain cases, certain individuals possessed fermentative powers which other individuals lacked. Extreme variability in this respect was the biological keynote of the Typho-coli group.

Dr. O'Farrell pointed out that B. *paratyphosus a.* had been found in drinking water in Johannesburg. The determining cultural characteristic taken being the time taken for formation of gas.

Dr. Mervyn Crofton queried the necessity for such a troublesome process as "sugaring" out organisms each into their own particular category, at any rate for vaccine purposes. He considered that if the probable infecting agent was found, its group determined, and its specificity tested

by the index, investigation had gone far enough for practical therapeutic purposes. He suggested further that an associated pyorrhœa alveolaris might have been the primary source of the infection in this case, as an organism very similar to paratyphosus had been found with other organisms in this condition.

Professor Mettam said that the great interest of Prof. McWeeney's paper for him lay in its bearing upon the question of meat poisoning. He had recovered an organism closely resembling Paratyphosus B. from the spleen of an animal dead from no obvious cause. He injected 10 cc.ms. of a broth culture of this organism into the jugular vein of an aged cow he had in his possession, expecting to see signs in a few days of acute diarrhœa. On the fourth day the cow aborted; on the seventh she died, and he recovered the paratyphoid bacilli from the stomach, intestine, and thigh muscles. The experiment showed that paratyphosus was pathogenic for the food-producing animals. He had also found it in fowls, and he thought it must have a very wide distribution. He wished to know whether paratyphosus was a common infecting agent in man; whether it occurred associated with *B. coli* in the intestine without producing symptoms and then became suddenly pathogenic; and whether meat so infected and eaten reproduced the disease in man.

Dr. McWeeney replied, and referred to the "Journal of Tropical Medicine," which gave an account of the Paratyphoid A. discovered in water. Continuing he said when it became a question of injecting it into a human subject, at the risk of waiting a few days before injecting a vaccine, he preferred to have accuracy as to the organism injected. He had a general impression that the injection of mixed organisms was rather objectionable and calculated to give rise to disappointing, if not positively serious, results. He thought that nowadays the opsonic index was too much neglected. It showed, when carefully carried out, whether there was any relation between the organism isolated and the state of the patient's humours, and if he were the patient he should prefer not to be vaccinated unless the organism had been accurately isolated. Professor Mettam's remarks were very interesting. He (Dr. McWeeney) had sent him the Limerick strain of the Gaertner bacillus which

he injected into a calf, with the result that the calf died in seven hours of what must have been a tremendously severe intoxication. Regarding his observation as to the presence of this organism in the muscles of animals, he had found this to be so. He had always included a tube inoculated from the muscles, and had not failed to obtain a cultivation of the bacillus. Doubts were beginning to arise in the minds of a good many as to whether the paratyphoid bacillus was responsible for a great many symptoms attributed to it. In the Lister Institute recently an epidemic had occurred among the guinea pigs. They were swept off by an infection, and on making bacteriological and other examinations nothing but Paratyphoid B. was found. Artificially-inoculated guinea pigs did not convey the disease to healthy animals placed with them. It was found, moreover, that filtration of the serum of animals which had died of the actual infection did not rob it of its infective properties. It was capable of producing the infection although bacterially sterile, and the *materies morbi* must, therefore, have been an ultra-microscopic "filter-passer."

The Pathological Report of St. Vincent's Hospital.

Dr. T. T. O'Farrell said he wished to apologise to the Section for bringing this Report before it, as reports at the best of times are rather dry reading. The only excuse he could make was that it was an attempt to put on record the class of work that was being carried on in the Pathological Department of one of the General Hospitals in Dublin. The report was incomplete, but he hoped it might have the effect of encouraging the publication of similar reports of the pathological department of other general hospitals in the city, where a large amount of good work was done, and much useful material investigated during the year. He hoped it might promote the interchange of specimens between the different hospitals, and so in combined action keep the standard of teaching well up to, if not above, the modern standard. He did not intend to read the whole report, but only to touch on matters which might prove interesting, and to give a few experiences in teaching during the year. The report was divided into two main divisions—(1) Dealing with the examinations made, and (2) the teaching of the department.

(1) The number of examinations made was placed under the different headings, and here he was met by a difficulty which he was sure had been experienced by others—namely, the lack of an altogether satisfactory method of collecting material with regard to future identification of specimens, and a satisfactory method of reporting results. This difficulty was usually experienced when a number of specimens came from the wards for examination, and where insufficient data had been given as to what particular examination was required. The method he had adopted was to have coloured cards printed with headlines, which had to be filled in and sent to the laboratory with the specimen. When the examination was made the report was written out in the book, a specimen of which he had brought with him. Its pages consisted of a double sheet with perforations, one part being kept in the block and the other sent to the ward. This latter sheet corresponded exactly in size to the chart and case sheet, so that all could be conveniently filed together. There was a space for the name of the house surgeon and one for the clinical clerk, which was invaluable as it indicated the persons to whom application should be made in the event of further information being required about the case. This method had been found to work fairly satisfactorily up to the present, but the system required modification in the case of examinations made for the out-patient department. Dr. O'Farrell then proceeded to speak of vaccine, serum, and tuberculin treatment. This was carried out largely by the department, but it had been gradually passing into the hands of the general hospital staff, the materials being supplied from the laboratory and advice given if required. The resident medical officers and clinical clerks were encouraged as far as possible to make their own cultures, vaccines, &c., and on the whole advantage had been taken of this. Under this heading Dr. O'Farrell wished to record his humble appreciation of the good effect of the Practical Pathology recently introduced into the Third Professional Examination under the Conjoint Scheme of the Irish Royal Colleges of Physicians and Surgeons. Since then the resident pupils who had passed this examination were able to take an active part and an intelligent interest in Clinical Pathology. In passing he mentioned that good results were obtained from *Bacillus coli communis* vaccine, particularly in

cases of cystitis due to this organism. In acute cases it was found better to combine serum and vaccine treatment. For example, in acute appendicitis a preliminary dose of anti-coli serum was given to neutralise the existing toxic products, followed later by the vaccine so as to stimulate the formation of anti-bodies. It was interesting to note that tuberculin T. R. was found to give best results in genito-urinary and gland cases, whereas tuberculin B. E. gave best results in bone cases. B. E. had bad effects in genito-urinary cases, which improved on changing to T. R. With regard to diagnostic tuberculin the ophthalmo-reaction had been almost altogether superseded in the hospital by the safer and, he thought, more reliable cutaneous reaction, which, on the whole, gave satisfaction. The inoculation method was not used, though it was recognised by many authorities to be the most reliable test. Numerous cases of special interest were met with during the year, but time would not allow of a detailed account of them. Among them might be mentioned hypernephroma, pyonephrotic kidney, spleen removed by operation from a case of splenic anæmia, aneurysm of the aorta.

Specimens illustrating some of these cases were to be found on the trays.

Autopsies.—Only 23 autopsies had been performed, and it was very disappointing that more could not be obtained, though special encouragement had been given to resident medical officers to obtain them. A very satisfactory *post-mortem* book had been designed, and was at present in use, a specimen page of which Dr. O'Farrell exhibited. The printed headings reduced the amount of writing to a minimum, and at the same time it could be read almost at a glance; it tended to make the examinations more systematic, and prevented the omission of important things. Under this heading an interesting observation had been made with regard to the prevalence of the Trichocephalus dispar. This parasite was common enough in the tropics and at home among children; but in the cases examined the majority were adults. In only one case, a child, was there an appendicitis, and though a careful examination had been made no ova or parasites could be discovered actually in the appendix. In this latter case Oxyuris vermicularis was found in the cæcum as well as Trichocephalus dispar.

Museum.—An apology must be made for dignifying this small room by such an important name, but he hoped some day to see it extended, so that the name applies more to what he hoped it will be rather than to what it is at present. It consists of a collection of specimens exemplifying the commoner pathological conditions, and has been put to good use by the students, who bring in their books and study the specimens as they read the descriptions. A small typed catalogue is provided, which just names the specimens without any detailed account, but this he intended to elaborate at a future date. Among the exhibits is a collection of cultures of some of the more important pathogenic micro-organisms (specimens of which Dr. O'Farrell showed) There is also a set of test-tubes containing specimens of the crude materials used in the manufacture of culture media with some of the ready-made culture-media in common use. There is also a collection of vaccines, serums and tuberculin to be seen, which have the effect of familiarising the student with these preparations and give him at a glance the range covered by this most important branch of prophylaxis, diagnosis and treatment. A small collection of calculi has been made, from which Dr. O'Farrell brought a salivary calculus from Wharton's duct and a rhinolith, both of which were removed by operation. From a case containing various other specimens Dr. O'Farrell selected a tsetse fly and some culex mosquitos, which were kindly sent him from the laboratory, Royal Army Medical College, London, as also some microscopic specimens of protozoa—*e.g.*, trypanosome and spirochæte.

(2) The second part of the report dealt with the teaching given during the year, and gave an idea of the field covered. An attempt was made to give as systematic a course as possible and at the same time to keep in line with, and to take full advantage of, the large amount of material available in the wards and from the operation theatre. The staff had to be thanked for their kind co-operation in this respect and for their encouragement and assistance in carrying out the various investigations. It was also a source of gratification to find that the museum material had been frequently utilised by the staff to illustrate their lectures. He now came to a point which he considered of great importance in view of the extraordinarily rapid progress

in Scientific Medicine which had revolutionised teaching during the last few years, and which still continued at the present moment throughout the world. The things which might be particularly alluded to were the studies in immunity and in tropical diseases. In his opinion our ordinary professional examinations did not specially insist on a knowledge of recent research. He had been teaching for the past six or seven years, and he thought that most men of larger experience would confirm the opinion he had formed that the *average* medical student would not take a very great interest in the subject-matter outside his examination work. It seemed to him that if they knew that at least one question at the oral or written examination would be asked on recent research they would take a little trouble to keep in touch with modern progress. He would not have the answering of this question essential for a pass, but he thought it would give an opportunity for the *progressive student* to score extra marks, and it would develop a habit in students of reading recent publications—a thing much to be desired. Under the heading Post Graduate Work in the Report special facilities were given to practitioners who might have a few days to spare at vacation time, though not enough to take out a full course, and to brush up their clinical methods, and to inspect the more modern methods of treatment with which they might not have been in touch. The teaching of nurses did not properly come into the domain of the laboratory work, but several lantern demonstrations had been given illustrating the commoner parasites and bacteria and a few rough experiments showing the multiplication of bacteria on suitable soil. In this way the principle of asepsis was demonstrated in a practical manner. In conclusion he had to thank the Section for bearing with him so long, and he hoped it would think leniently of this somewhat sketchy report.

Dr. Parsons and Professor McWeeney both spoke appreciatively of Dr. O'Farrell's work in the development of his department, and Professor McWeeney suggested some improvements in the tabulation of the *post-mortem* book. As regards Dr. O'Farrell's suggestion *re* asking questions on recent research in pass examinations, he said he could hardly expect any student to answer intelligently on the subject of "complement fixation." He had found very few qualified medical men competent to deal with it.

Dr. T. G. Moorhead, in referring to Dr. O'Farrell's remarks on vaccine treatment, said he had been using tuberculin in disease of the kidney, bladder, and epididymis with success; but in a case of tubercular cystitis the result was less satisfactory. He was interested to hear of the different results from the use of different preparations of tuberculin used, and asked a question as to the dosage. He had no great hopes of teaching the higher branches of pathological research to students where there was such difficulty in impressing the very elements.

Dr. T. P. C. Kirkpatrick emphasised the importance of tabulating work. At present it was difficult to obtain accurate information from the various hospitals in Dublin when any particular form of disease was being investigated. Anything calculated to induce men to take accurate notes would be welcome; and if this method of recording and reporting cases was adopted on an extended scale, it might be possible to establish a general hospital report. The number of interesting cases occurring in any one hospital in a year was so limited that a single hospital report was not of any great value. But if the reports of all the hospitals were kept and collated their value would be greatly enhanced.

Dr. O'Farrell, in reply, said that many students did try to keep abreast of the times by reading medical journals, and he thought that if more help and encouragement were given them they would turn to their scientific papers with as much pleasure as they now turned to an ordinary magazine. In answer to Dr. Moorhead's question as to the dosage of tuberculin he said he began with $\frac{1}{5000}$ of a milligramme, but never went higher than $\frac{1}{1000}$ milligramme. In the case of bacillus coli the dose was from 10 to 25 millions.

Septic Infarction of the Spleen in Pneumonia.

Dr. Coleman showed a lung, spleen, and kidney from a patient under his care at the Whitworth Hospital. The patient had developed acute croupous pneumonia of the left base, and during convalescence he complained of pain in the left hypochondriac region. Two days later he passed a large quantity of pus in the urine; this cleared off in a few days; but then the urine became more and more scanty until complete suppression ensued, followed by uræmic symptoms and death. The autopsy showed resolving pneumonia in the left

lower lobe, and an abscess in a greatly enlarged spleen. The right kidney had been rendered functionless by old tuberculosis, while the left, although somewhat fibrous, was otherwise normal. The bladder showed acute hæmorrhagic cystitis. Dr. Coleman thought the sequence of events interesting:—pneumonia, followed by a septic infarct of the spleen with suppuration. There was a considerable quantity of pus around the left kidney, and he thought that this had somehow penetrated the left ureter, although no definite opening into it was found. This perinephritic abscess by presssure on the left kidney caused suppression of urine, the right kidney being completely disorganised by chronic disease.

Thoracic Aneurysm.

Dr. Coleman also showed a specimen of aneurysm with a sacculated diverticulum—the latter showing a very narrow opening. The trachea was compressed, being flattened from before backwards. The patient died from respiratory obstruction.

LE PARIS MÉDICAL.

The number of this periodical for July 1, 1911, edited by Professor Gilbert, and published by the firm of J. B. Baillière et Fils, is entirely devoted to Diseases of the Heart. The titles of the articles contained in the number are as follow :—Diseases of the Heart in 1911 (yearly review), by Drs. Pierre Lereboullet and Heitz. Rôle of Radiology in the diagnosis and evolution of cases of Aortitis, by Drs. Vaquez and Bordet. The Heart in the malignant Visceral Rheumatism of Childhood, by Drs. Weil and Mouriquand. Measurement of Arterial Pressure, by Dr. Pachon. Surgical Treatment of Adherent Pericardium, by Dr. Wiart. Dietetic Treatment of Cardiac Cases, by Dr. Ribierre. The number also contains an illustrated life of Professor Potain, and, under the heading *Therapeutic Formulæ*, "Diuretics in Heart Cases." Other headings are *Libres propos*, *La médecine humoristique*, *Diététique*, *La vie médicale*.

SANITARY AND METEOROLOGICAL NOTES.

Vital Statistics.

For four weeks ending Saturday, June 17, 1911.

IRELAND.

The average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended June 17, 1911, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 15.9 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,149,495. The deaths registered in each of the four weeks ended Saturday, June 17, and during the whole of that period in the several districts, alphabetically arranged, correspond to the following annual rates per 1,000. In some cases, owing to deaths not having been registered within the week in which they occurred, the rates do not fairly represent the weekly mortality :—

Towns, &c.	Week ending				Average Rate for 4 weeks	Towns, &c.	Week ending				Average Rate for 4 weeks
	May 27	June 3	June 10	June 17			May 27	June 3	June 10	June 17	
22 Town Districts	16.5	17.1	16.1	15.9	16.4	Lisburn -	9.1	18.2	17.1	12.9	14.3
Armagh -	13.7	13.7	6.9	6.9	10.3	Londonderry	10.7	19.0	23.0	10.2	15.7
Ballymena	—	19.2	9.2	18.3	11.7	Lurgan -	4.4	8.9	17.2	12.9	10.9
Belfast -	16.1	16.4	15.5	14.4	15.6	Newry -	21.0	—	4.4	8.7	8.5
Clonmel -	5.1	20.5	5.1	10.1	10.2	Newtownards	11.4	17.2	22.9	—	12.9
Cork -	20.5	16.4	15.0	15.0	16.7	Portadown	20.7	31.0	17.8	8.9	19.6
Drogheda -	16.3	20.4	21.0	8.4	16.5	Queenstown	13.2	19.8	13.2	26.4	18.1
Dublin (Reg. Area) -	19.0	17.9	18.3	19.2	18.6	Sligo -	14.4	4.8	14.0	14.0	11.8
Dundalk -	31.9	27.9	11.9	7.9	19.9	Tralee -	10.6	31.7	5.3	21.1	17.2
Galway -	15.5	7.8	11.8	11.8	11.7	Waterford	19.5	17.5	13.3	17.1	16.8
Kilkenny -	14.7	24.6	9.9	29.8	19.7	Wexford -	4.7	14.0	18.2	22.8	14.9
Limerick -	6.8	15.0	8.1	12.2	10.5						

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 22 districts during the week ended Saturday, June 17, 1911, were equal to an annual rate of 1.0 per 1,000, the rates varying from 0.0 in thirteen of the districts to 5.1 in Clonmel. Among the 107 deaths from all causes for Belfast are 4 from whooping-cough, one from scarlet fever, and one from diarrhœa. Of the 4 deaths from all causes registered in Ballymena one is from diphtheria and one of the 2 deaths for Portadown is from whooping-cough. Of the 2 deaths registered in Dundalk, one is from diphtheria.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock, and Kingstown. The population of this area is 407,057, that of the City being 313,526, Rathmines 37,528, Pembroke 29,368, Blackrock 9,013, and Kingstown 17,622.

In the Dublin Registration Area the births registered during the week ended Saturday, June 17, 1911, amounted to 232—130 boys and 102 girls; and the deaths to 159—76 males and 83 females.

DEATHS.

Omitting the deaths (numbering 10) of persons admitted into public institutions from localities outside the Area, the annual rate of mortality was 19.2 per 1,000. During the twenty-four weeks ending with Saturday, June 17, the death-rate so corrected averaged 21.9, and was 2.6 below the mean rate for the corresponding portions of the ten years 1901–1910.

The total deaths registered, numbering 159, represent an annual rate of 20.5 per 1,000. The annual death-rate for the past twenty-four weeks was 23.2 per 1,000, and the average annual rate for the corresponding period of the past ten years was 25.6 per 1,000 of the mean population for all deaths registered.

Included in the total deaths from all causes were 2 deaths from measles, 3 from whooping-cough, one death from cholera nostras, one death from diphtheria, 4 from diarrhœa and *enteritis* of children under 2 years of age, and one death from influenza.

In each of the three weeks preceding, deaths from measles were 6, 3, and 4; deaths from whooping-cough were one, 4, and

one ; deaths from diphtheria were 0, one, and 4 ; deaths from diarrhœa and *enteritis* of children under 2 years of age were 2, 10, and one ; and deaths from influenza were 2, 0, and 0.

Of 30 deaths from tuberculous disease, 23 were caused by pulmonary tuberculosis, 2 by tubercular meningitis, one by *tabes mesenterica*, one death by tuberculous disease of a joint, and 3 by disseminated tuberculosis. Deaths from all forms of tuberculosis in the three preceding weeks were 31, 31, and 33 respectively.

There were 6 deaths from broncho-pneumonia and 3 deaths from lobar pneumonia.

The deaths of 10 persons were attributed to cancer.

Of 3 deaths from *convulsions*, 2 were of infants under one year of age, and one was between the ages of one year and 2 years.

Organic diseases of the heart accounted for the deaths of 18 persons. There were 16 deaths from bronchitis.

Of 5 deaths from accidental causes, 3 were by burning (one being the death of a child between the ages of 2 years and 5 years), one was on a railway, and one was by immersion.

One death by suicide was registered on the Coroner's certificate.

In 4 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases include the deaths of 2 infants under one year of age, and the death of one person aged 76 years.

Forty-two of the persons whose deaths were registered during the week were under 5 years of age (24 being infants under one year, of whom 6 were under one month old), and 37 were aged 65 years and upwards, including 25 persons aged 70 years and upwards. Among the latter were 19 aged 75 years and upwards, of whom 2 (a male and a female) were stated to have been aged 91 and 95 years, respectively.

The Registrar-General points out that the names of the cause of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," and the "Tuberculosis Prevention (Ireland) Act, 1908," as set forth in the following table, have been furnished by Sir Charles

A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; by Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; by Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; by the Executive Sanitary Officer for Kingstown Urban District; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended June 17, 1911, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Small-pox	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Pyrexia (origin uncertain) *a*	Enteric or Typhoid Fever	Erysipelas	Puerperal Fever	Whooping-cough	Cerebro-spinal Fever	Tuberculer Phthisis (*Phthisis*)	Total
City of Dublin	May 27	-	*	c	14	-	-	3	-	2	7	1	-	*	-	9	36
	June 3	-	*	c	14	-	-	6	-	2	6	12	-	*	-	9	49
	June 10		*	*	13	-	-	8	-	-	10	10	-	*	-	18	59
	June 17	-	*	*	6	3	-	10	-	4	14	3	-	*	-	17	57
Rathmines and Rathgar Urban District	May 27	-	*	*	1	-	-	1	-	-	2	-	-	*	*	*	4
	June 3	-	*	*	4	-	-	-	-	1	1	1	-	*	*	*	7
	June 10	-	*	*	-	-	-	1	-	-	-	-	-	*	*	*	1
	June 17	-	*	*	2	-	-	-	-	-	-	1	-	*	*	*	3
Pembroke Urban District	May 27	-	12	-	-	-	-	1	-	-	-	1	-	10	-	-	24
	June 3	-	5	-	-	-	-	1	-	-	-	-	-	2	-	-	8
	June 10	-	11	-	3	-	-	-	-	-	-	-	-	10	-	-	24
	June 17	-	6	-	-	-	-	-	-	-	-	2	-	4	-	-	12
Blackrock Urban District	May 27	-	*	*	2	-	-	-	-	-	-	-	-	*	-	*	2
	June 3	-	*	*	2	-	-	-	-	-	-	-	-	*	-	*	2
	June 10	-	*	*	3	-	-	-	-	-	-	-	-	*	-	*	3
	June 17	-	*	*	-	-	-	-	-	-	-	-	-	*	-	*	-
Kingstown Urban District	May 27	-	*	*	-	-	-	-	-	-	-	1	-	*	*	-	1
	June 3	-	*	*	-	-	-	-	-	-	-	-	-	*	*	-	-
	June 10	-	*	*	-	-	-	1	-	-	-	-	-	*	*	-	1
	June 17	-	*	*	-	-	-	-	-	-	-	-	-	*	*	-	-
City of Belfast	May 27	-	*	*	11	-	-	8	-	-	2	2	1	*	-	6	30
	June 3	-	*	*	4	-	-	4	1	-	1	1	-	*	-	13	24
	June 10	-	*	*	8	-	-	6	-	-	-	2	-	*	1*b*	6	23
	June 17	-	*	*	12	3		5	-	-	1	3	1	*	-	11	36

a Continued Fever. *b* Returned as cerebro-spinal meningitis.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended June 17, 1911, 37 cases of measles were admitted to hospital, 32 cases were discharged, and 91 cases remained under treatment at the close of the week. In the 3 pre-

ceding weeks such cases had been 75, 86, and 86, respectively.

Twelve cases of scarlet fever were admitted to hospital, 6 were discharged, and 72 cases remained under treatment at the close of the week, exclusive of 20 convalescents from the disease who were still under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the 3 preceding weeks the cases in hospital were 74, 73, and 66, respectively.

Three cases of typhus were admitted to hospital during the week, and remained under treatment at its close.

Fourteen cases of diphtheria were admitted to hospital, 8 were discharged, and there was one death. The cases in hospital, which at the close of the 3 preceding weeks numbered 41, 36, and 35, respectively, were 40 at the close of the week.

Thirteen cases of enteric fever were admitted to hospital, 14 were discharged, and 43 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the 3 preceding weeks being 46, 45, and 44.

In addition to the above-named diseases, 5 cases of pneumonia were admitted to hospital, 8 were discharged, there were 2 deaths, and 25 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, June 17, in 77 large English towns, including London (in which the rate was 11.2), was equal to an average annual death-rate of 12.2 per 1,000 persons living. The average rate for 8 principal towns of Scotland was 14.2 per 1,000, the rate for Glasgow being 14.6, and for Edinburgh 13.5.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended June 17. From this report it appears that of a total of 62 cases notified, 32 were of phthisis, 13 of scarlet fever, 9 of diphtheria, 7 of erysipelas, and one of enteric fever. Among the 322 cases of infectious diseases in hospital at the close of the week were 84 cases of scarlet fever, 60 of phthisis, 46 of diphtheria, 35 of measles, 75 of whooping-cough, 9 of erysipelas, 2 of chicken-pox, 4 of enteric fever, and one of puerperal fever.

Meteorology.

Abstract of Observations made in the City of Dublin, Lat. 53° 20′ *N., Long.* 6° 15′ *W., for the Month of June,* 1911.

Mean Height of Barometer, - - -	29.978 inches.
Maximal Height of Barometer (6th, at 9 a.m.),	30.552 ,,
Minimal Height of Barometer (18th, at 9 a.m.),	29.411 ,,
Mean Dry-bulb Temperature, - - -	57.9°.
Mean Wet-bulb Temperature, - - -	54.1°.
Mean Dew-point Temperature, - -	50.7°.
Mean Elcastic Force (Tension) of Aqueous Vapour	.372 inch.
Mean Humidity, - - - - -	77.5 per cent.
Highest Temperature in Shade (on 2nd), -	72.9°.
Lowest Temperature in Shade (on 15th), -	43.0°.
Lowest Temperature on Grass (Radiation) (15th),	40.2°.
Mean Amount of Cloud, - - -	54.4 per cent.
Rainfall (on 11 days), - - -	1.743 inches.
Greatest Daily Rainfall (on 16th), - -	.409 inch.
General Directions of Wind, - - -	N.E., W.

Remarks.

June, 1911, may be described as a favourable month from all points of view. An absolute drought, which commenced in Dublin on May 15th, lasted until 1 35 a.m. of the 16th June—that is to say, for a full 30 days. At the hour named rain began to fall in steady showers, the break in the weather having been heralded by the overspreading of the sky by a sheet of cirrus cloud in which a solar halo appeared at 1 p.m. of the 15th. The second half of the month was cloudy, windy and showery, rain falling in measurable quantities on 11 out of the last 16 days. Slight thunderstorms occurred on the 17th and 23rd, and thunder was heard on the 18th as well as on the 1st, when, however, the weather remained dry in Dublin. During the first fortnight an anticyclone lay off the N.W. coasts of the British Isles, so that N.E. winds prevailed. The amount of bright sunshine was very large in the same period, the sky being practically cloudless on the 7th and 8th.

The unsettled weather was ushered in by the gradual approach of a low pressure system from the Azores to the S.W. of Ireland. This passed northwards along the west coast of this country and

remained fixed on the Atlantic between Scotland and Iceland for many days. On the 24th torrents of rain fell along the east and south-east coasts of Great Britain in connection with a depression of some depth. At North Shields 2.57 inches of rain were measured on the morning of Sunday, the 25th.

In Dublin the arithmetical mean temperature (58.4°) was above the average (57.9°) by 0.5° ; the mean dry bulb readings at 9 a.m. and 9 p.m. were 57.9°. In the forty-seven years ending with 1911, June was coldest in 1909 (M. T. = 54.8°), 1907 (M. T. = 55.4°), 1882 (M. T. = 55.8°), and 1879 (" the cold year ") (M. T. = 55.9°). It was warmest in 1887 (M. T. = 62.3°), 1896 (M. T. = 61.4°), and 1899 (M. T. = 61.3°). June, 1909, established a record for coldness. In 1910, the M. T. was 57.6°.

The mean height of the barometer was 29.978 inches, or 0.061 inch above the corrected average value for June—namely, 29.917 inches. The mercury rose to 30.552 inches at 9 a.m. of the 6th, and fell to 29.411 inches at 9 a.m. of the 18th. The observed range of atmospheric pressure was, therefore, 1.141 inches.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 57.9°, or 3.1° above the corresponding M. T. for May, 1911. Using the formula, *Mean Temp.* = *Min.* + (*Max.*—*Min.* × .465), the value was 57.9°, or 0.5° above the average mean temperature for June, calculated in the same way, in the thirty-five years, 1871–1905 inclusive (57.4°). The arithmetical mean of the maximal and minimal readings was 58.4°, compared with a thirty-five years' average of 57.9°. On the 2nd the thermometer in the screen rose to 72.9°—wind, E.N.E. ; on the 15th the temperature fell to 43.0°—wind, E.N.E. The minimum on the grass was 40.2° on the 15th.

The rainfall amounted to 1.743 inches on 11 days. The average rainfall for June in the thirty-five years, 1871–1905, inclusive, was 1.990 inches, and the average number of rain-days was 15. The rainfall, therefore, and the rain-days were below the average. In 1878 the rainfall in June was very large—5.058 inches on 19 days ; in 1879 also, 4.046 inches fell on 21 days. On the other hand, in 1889, only .100 inch was measured on 6 days. In 1887 the rainfall was only .252 inch, distributed over 5 days. In 1909, 1.651 inches fell on 12 days. June, 1910, established an undisputed record for excessive rainfall in Dublin—the measurement being 6.211 inches on 19 days.

High winds were noted on 7 days. A solar halo was seen

on the 15th. Thunderstorms occurred on the 17th and 23rd, and thunder was heard on the 1st and 18th.

The rainfall in Dublin during the six months ending June 30th amounted to 7.729 inches on 80 days, compared with 18.632 inches on 111 days in 1910; 12.061 inches on 84 days in 1909, 11.729 inches on 107 days in 1908, 12.336 inches on 108 days in 1907, 12.641 inches on 109 days in 1906, 10.201 inches on 92 days in 1905, 12.817 inches on 102 days in 1904, 15.054 inches on 108 days in 1903, 12.344 inches on 98 days in 1902, 9.352 inches on 80 days in 1901, only 6.741 inches on 67 days in 1887, and a thirty-five years' average of 12.030 inches on 96 days.

At the Normal Climatological Station in Trinity College, Dublin, the observer, Mr. C. D. Clark reports that the mean height of the barometer was 29.974 inches, the highest reading observed being 30.545 inches at 9 a.m. of the 6th, the lowest, 29.390 inches at 9 a.m. of the 18th. The arithmetical mean temperature was 57.6°, the mean dry-bulb reading at 9 a.m. and 9 p.m. being 58.2°. The thermometer rose to 71.7° in the shade on the 5th, and fell to 41.9° on the 15th. The grass minimum was 31.6° on the 15th. Rain fell on 9 days to the amount of 1.534 inches, .336 inch being measured on the 16th. The number of hours of bright sunshine registered by the Campbell-Stokes sunshine recorder was 190.9, giving a daily average of 6.4 hours. The corresponding figures for 1905 were 217.6 hours and 7.3 hours, 1906, 210.3 hours and 7.0 hours, 1907, 129.4 hours and 4.3 hours, 1908, 181.4 hours and 6 hours, 1909, 158.7 hours and 5.3 hours, and 1910, 139.9 hours and 4.7 hours. The mean earth temperature read at 9 a.m. was 60.1° at a depth of 1 foot below the surface of the ground, 56.2° at a depth of 4 feet.

At Ardgillan, Balbriggan, Co. Dublin, Captain Edward Taylor, D.L., measured 3.09 inches of rain on 11 days, the heaviest fall in 24 hours being 1.63 inches on the 17th. The rainfall was 0.88 inch above the average, while the rain-days were 2 in defect. Temperature in the screen rose to 69.1° on the 27th, having fallen to 39.2 on the 14th. Since January 1, 1911, the rainfall at Ardgillan amounts to 10.97 inches, or 1.29 inches below the average, and the rain-days number 81, or 11 in defect. On the 17th a thunderstorm, accompanied by heavy rain and hail, prevailed from 12 25 p.m. to 2 10 p.m.; the hailstones were a

quarter of an inch in diameter. Later in the day, heavy showers fell between 3 30 p.m. and 5 45 p.m. At 6 p.m. the weather cleared. The rainfall to that hour was 1.58 inches. At a station near Skerries, only 1¼ mile distant towards the south, only .67 inch was recorded as the rainfall for the 17th, showing how very local thunderstorm-rains are.

At Cheeverstown, Clondalkin, Co. Dublin, Miss Violet C. Kirkpatrick recorded 1.60 inches of rain on 11 days. The greatest fall in 24 hours at Cheeverstown was .38 inch on the 18th.

Dr. Arthur S. Goff returns the rainfall at Lynton, Dundrum, Co. Dublin, at 1.58 inches on 10 days, compared with 6.97 inches on 21 days in 1910. The greatest daily fall was .49 inch on the 16th. The mean shade temperature was 60.2°. The thermometric range was from 76° on the 4th to 42° on the 15th.

At Manor Mill Lodge, Dundrum, Co. Dublin, Mr. George B. Edmondson registered a rainfall of 1.45 inches on 10 days. The greatest fall in 24 hours was .46 inch on the 16th. The mean temperature of the month was 59.3°, the extremes being—highest, 79° on the 2nd ; lowest, 42° on the 16th. The half-year's rainfall was 8.20 inches on 85 days.

Mrs. Olive F. Symes supplies the following record of the rainfall at Druid Lodge, Killiney :—Rain fell on 11 days to the amount of 1.66 inches, the maximal fall in 24 hours being .94 inch on the 16th. The average rainfall for June at Cloneevin, Killiney, in the 24 years, 1885–1908, was 1.771 inches on 13.2 days.

Mr. T. Bateman reports that the rainfall at The Green, Malahide, was 1.695 inches on 8 days. The heaviest fall in 24 hours was .545 inch on the 17th. The mean shade temperature was 56.6°, the extremes being—highest, 71° on the 5th ; lowest, 40° on the 13th.

Dr. C. Joynt returns the rainfall at 21 Leeson Park, Dublin, at 1.820 inches on 11 days, .450 inch having been recorded on the 16th, and .440 inch on the 23rd. The half-year's fall was 8.172 inches.

Dr. J. H. Armstrong reports that at Coolagad, Greystones, Co. Wicklow, the rainfall was 2.23 inches on 10 days. The heaviest rainfall in 24 hours was 1.21 inches on the 16th. The Welsh coast was clearly visible at 5 45 p.m. of the 28th.

At Clonsilla, Greystones, Co. Wicklow, Dr. W. Stewart Ross measured 1.86 inches of rain on 10 days—.90 inch being recorded on the 16th. The mean temperature was 57.3°, the extremes

being—highest, 73°, on the 4th ; lowest, 39°, on the 15th. The mean maximal temperature was 65.5° ; the mean minimal temperature was 49.1°.

Dr. J. T. Crowe reports that at the Royal National Hospital for Consumption for Ireland, Newcastle, Co. Wicklow, rain fell on 10 days to the amount of 2.19 inches, the maximal fall in 24 hours being 1.01 inches on the 16th. The mean temperature for the month was 56.3°, the extremes being—highest, 70° on the 2nd and 3rd ; lowest, 37° on the 15th. The mean maximum temperature was 63.6° ; the mean minimum temperature was 48.9°.

The Rev. Arthur Wilson, M.A., reports a rainfall of 2.21 inches on 13 days at the Rectory, Dunmanway, Co. Cork. On the 15th .84 inch was measured. The first two weeks were very fine and warm. Thunder and lightning occurred on the night of the 2nd. The rainfall for the completed six months of 1911 amounts to 26.50 inches on 99 days, the averages being 26.30 inches and 116 days.

Mr. W. Miller returns the rainfall at Cork at 2.94 inches on 11 days—this amount exceeding the average for June by .54 inch. The greatest rainfall in 24 hours was 1.42 inches on the 18th. Thunder and lightning occurred on that day. Thunder also was heard on the 3rd and 16th. The rainfall of the first six months of 1911 in Cork was 12.83 inches on 82 days, or 4.52 inches and 9 days short of the average.

At Derreen, Kenmare, Co. Kerry, Mr. W. Holbrow recorded a rainfall of 3.72 inches on 12 days, the heaviest fall in 24 hours, being .80 inch on the 15th. Drought prevailed from the 6th to the 15th. The latter end of the month was showery, with very cold nights. Up to June 30, the rainfall at Derreen amounted to 26.81 inches.

At the Ordnance Survey Office, Phœnix Park, Dublin, rain fell in June on 12 days to the total amount of 1.541 inches, .370 inch being registered on the 23rd. The duration of bright sunshine was 194.2 hours, the most in one day being 14.3 hours on the 7th.

PERISCOPE.

SUNSTROKE.

THERE is an excellent leading article on sunstroke in the "Lancet" of 15th July, 1911. The following are extracts from the article :—The sun may excite the forms of injurious effect known respectively as "heat collapse" and "heat-stroke." Heat collapse is not usually a severe condition. The patient suddenly turns giddy ; his skin is moist and cool ; his breathing hurried, but never stertorous ; his pulse small and soft ; his pupils dilated ; his temperature remains at, or falls below normal ; whilst there is no complete loss of consciousness as a rule. Recovery generally ensues when the patient is taken into the shade, his clothes are loosened, cold water is dashed on his head, and ammonia is held to his nostrils. Far different, however, is it with heat-stroke This may be either direct or indirect. In *direct* heat-stroke, or sun-stroke, the attack may occur in more than one form. In one form the persons affected are mostly more or less untrained to severe exertion, as, for instance, young soldiers newly arrived in a hot country and unaccustomed to the fatigues of marching, and it is especially likely to affect them when the air is moist, so that the skin action becomes diminished. Violent headache is first complained of ; the march, however, is still continued until the patient at length falls down in convulsions, with teeth firmly clenched, insensibility absolute, dyspnœa, small and weak pulse, and often incontinence of urine. In a second form the subject, streaming with sweat, becomes progressively paler, with cyanosed lips, injected eyes, swollen veins, respiration shallow and quiet, until he slips to the ground. Consciousness is not, as a rule, entirely lost, and revival occurs if the patient be relieved of all impediments to free respiration. In yet a third form the subject becomes extremely thirsty, without any feeling of fatigue, and suddenly falls down comatose. The state of coma may last from twenty-four to thirty-six hours, and may end in death without any recovery of consciousness. Lastly, in a fourth variety, the soldier, after a hot and wearying march in the sun,

is seized with a racking headache, which hourly becomes more and more intense, so that within twenty-four hours he may be rolling about in agony from the terrific pain in the head. Soon great intolerance of light sets in, and then unconsciousness. Should the patient not die, the intense pain in the head on return to consciousness may last for six or eight weeks unrelieved by any drug, though showing slight evening remissions. It then gradually abates. In the indirect form of heat-stroke the individual is attacked indoors. He becomes pale and nauseated; has colic and incontinence of urine. Convulsions follow, to be succeeded by cyanosis, dyspnœa, and insensibility, with stertor and contracted pupils. The temperature may run up to 110° F., remaining high for some time after death.

THE CAUSE OF SLEEP.

At the National Museum for Natural History in Paris, M. R. Legendre lately delivered an extremely interesting lecture on "The Physiology of Sleep," which summarises the latest researches on the subject. He admitted at the outset that it was impossible to give any exact definition of sleep, which was to be distinguished from narcosis, hypnotism, and lethargy, and devoted himself chiefly to investigating the cause of sleep, of which many explanations have been suggested. He showed by fairly conclusive arguments, says the *Athenæum*, that this could be neither brain-pallor nor intoxication by carbonic acid, nor the presence of narcotic substances in the blood, theories which have had in their turn greater or less success; and finally avowed his preference for the view of Prof. Claparede (of Geneva) that sleep is not the result of fatigue, but an inherited instinct designed to protect the organism against the ill-effects of fatigue. He pointed out, however, that an injection of the cerebro-spinal (cephalo-rachidian) fluid from an animal suffering from insomnia would produce the same malady in one otherwise healthy; and that experiments were now being made to determine the toxic substance present in the fluid in question. Some of these experiments seem to show that the effect of sleep is limited to the brain and nerves. M. Legendre's whole lecture is extremely interesting and is reported in full in the *Revue Scientifique* of June 17.

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PART I.

ORIGINAL COMMUNICATIONS.

ART. VIII.—*The Sphere of Women in relation to Public Health.*[a] By HER EXCELLENCY THE COUNTESS OF ABERDEEN, President of the Congress and Honorary Fellow of the Royal Institute of Public Health.

[The Editors thank the Council of the Royal Institute of Public Health for permission to publish this Address.]

LET my first words be those of heartfelt appreciation of the honour done me by the Royal Institute of Public Health by their invitation to become President of this their third Congress held in Dublin; and let me assure Sir William Lever that I am deeply sensible of the extraordinary kindness of his remarks in inducting me as his successor. I recognise in this appointment not merely a token of kindly feeling towards myself and my fellow-workers in the Women's National Health Association of Ireland, but a flattering and encouraging recognition of

[a] Being the Presidential Address to the Health Congress held in Dublin under the auspices of the Royal Institute of Public Health, delivered in the Theatre of Trinity College, Dublin, on August 15th, 1911.

the work of women in the cause of that Public Health of which this Institute has constituted itself the champion and protector. Therefore, members of the Institute, accept the sincere gratitude of the women who are devoting themselves to Health work in Great Britain and Ireland, including both officials and voluntary workers, for this compliment which you have paid them in appointing a woman to be your President this year. This compliment is all the more marked when I remember that I am taking office in succession to one whose genius has given such practical illustrations of how an industrial community can carry on its avocations with the utmost success and at the same time create surroundings conducive to the most ideal health of body and mind both of the operatives and of their families. Ireland may, indeed, be proud of a son who is so conspicuously serving his day and generation, and I hope I may be permitted in the name of all present to offer to Sir William Lever our hearty gratulations on the royal recognition of those services which has recently been awarded to him. We are all very proud of him.

But, now, ladies and gentlemen, is this great compliment paid by this Institute to women Health Workers justifiable?

In so far as it is a personal compliment you must forgive me for saying that anything that I have been privileged to do for the public welfare has been sadly over-rated; but taken as an acknowledgment of the part that women are now taking in the many-sided health movement which is revolutionising human life and its environment the world over, I do not think too much importance can be attached to it. The truth is, ladies and gentlemen, that if you desire to have any great movement popularised and made to enter into the habits and homes of the people, you must have the women with you, or you will fail. If you wish to dislodge a deep-seated prejudice, if you wish to carry a great reform, if you wish to introduce successfully some new method of education, you must gain the women over

to your side. And is this not easily understood? Every mother in the land, from the highest to the lowest, must of necessity, although often unconsciously, mould the ideas and the conversation prevalent in the home, from the mere fact that she is always there and makes those home customs, habits, and associations which exercise so powerful an influence on the after lives of every man and woman.

And when it comes to matters of health, there, indeed, do you come against a stone wall if you wish to introduce reforms regarding food and dress, fresh air and children's training without taking the mistress of the household with you. What woman is there who does not treasure sayings and recipes and customs handed down to her by her mother and grandmothers. And whatever the doctors may tell us, we believe in our mothers in the secret of our hearts.

Perhaps I speak feelingly in the matter from early experience. I was brought up in a remote Highland glen in Invernesshire, twenty-three miles away from doctor, parish minister, railway or telegraph station. Nothing but the most serious of accidents or illnesses would bring a doctor up to our end of the strath—and my introduction to health work was carrying about the remedies prescribed by my mother, who had to do the best she could for the people, acting under the advice of doctors by correspondence. It may sound very unorthodox, but we were all firm believers up there in the efficacy of her treatment and of the bottles which issued from the big medicine cupboard in the boudoir, except perhaps some old bodies whose faith rested in the power of certain charms and stones treasured in secret places and handed round as cures for sickness of both human beings and animals. Forgive the personal allusion, but it serves to illustrate the tendency to put trust in the housewife in matters of health and in emergency, and it is this popular confidence which makes women such important allies or formidable antagonists in any health movement that may be inaugurated.

Doctors and men of science after deep research make

discoveries of far-reaching beneficence which they make known in medical journals and apply to patients as they may deem desirable, but when these discoveries involve acceptance of certain principles and practices by the general public in order to be efficacious, such as the facts that tuberculosis is not hereditary, but is transmissible and can be cured in its early stages, and can be prevented by proper building-up of resisting powers by good food and fresh air, then you have to secure the confidence of the housewives and their active co-operation if you wish for rapid and fruitful results.

That was the motive which induced us here in Ireland to form the Women's National Health Association, and through it to make our direct appeal to the women of all classes and all sections to realise their responsibilities and their opportunities of arresting the ravages of one of the worst foes of the human race and of building up a strong and vigorous race. The doctors had done their best for many years to preach their gospel, the Registrar-General published figures calculated to arouse the public, the Local Government Board issued blue books and circulars of advice and suggestion, and philanthropists held meetings to discuss the question and to consider schemes of remedy. But little effect can be produced either by legislation or by official work unless you have public opinion behind you, and public opinion is formed in the homes of the people. Very kind and encouraging words have been spoken of the work of the Women's National Health Association which will inspire us to further efforts, but whatever success has been attained has been the result of our having been fortunate enough to secure the personal interest and service of the women of the country, and to have been backed in our efforts by the doctors and clergy of all denominations and by the masters of the household themselves. This, then, is a woman's movement, supported by men, and also by another most important section of the community—the children. It is an organised effort to popularise the opinions arrived at by the medical profession and to get

them put into practice ; and with this in view we use every means at our command.

Lectures, health talks, illustrated by lantern slides or diagrams, popular travelling health exhibitions, health caravans, the publication of popular literature and pictures, talks to children, demonstrations of the different values of foods, and of the necessity for fresh air—the establishment of Babies' Clubs, Girls' Clubs, Milk Depôts, local Sanatoriums and Preventoriums, the encouragement of home industries, and in particular the growing and the cooking of fruits and vegetables, the encouragement of local entertainments and picnics, and all that tends to brighten life : these are some of the methods adopted by the various local committees established all over the country to carry out our work, and many of which have shown most admirable initiative and powers of originating new devices for our plan of campaign.

All these popular methods have been carried out in close co-operation with the more official section of our workers—that is, the district nurses, some forty of whom are maintained by the Association, and the women guardians and members of district councils, of whom there are now 158 in Ireland.

My principal object in speaking of the Women's Health Association is again to use it as an illustration of the results in health work obtainable by enlisting the women and children of the community as active soldiers in the campaign and by making use of their services in the most popular way possible. We borrowed many of our methods from our up-to-date cousins over the Atlantic, and we are glad to see our neighbour isle of Great Britain following our example. May I be allowed to enter an appeal to the members of the medical profession whom I have the honour of addressing not to despise these popular methods because they are not the methods of the profession, but, on the contrary, to act as our officers and direct us, and to make use of us. If we can look to them for guidance and depend upon their support while at the same time pursuing our own homely

plans to get into touch with the people—and especially with the mothers and children—I think we shall be able together to bring the human race forward by many long steps towards the goal of "mens sana in corpore sano," which you ever put before us.

But another point now arises. If the women citizens of every country are to be in a position to discharge rightly the responsibility of safeguarding the health of their homes and of those who live with them, it is clear that they must have proper and adequate training and education in all those subjects which bear on the health of the home. The education of a girl in any class of society which does not include thorough training in this most essential part of her lifework must be held to be defective.

Women who now enter the medical profession and the nursing profession have all the facilities of full training, owing to the work of those who have gone before them, and official Health Visitors and Sanitary Inspectors are also now able to obtain the instruction they require, with examination and certificates from this Institution and other kindred organisations, and also at many colleges and technical institutes. The importance of full equipment for Health Visitors cannot be pressed too strongly.

But my plea—and that of the Women's National Health Association—is for the general recognition of the essential need of making education along these lines a necessity for every girl in every grade of education. We have brought the matter before the Universities of Ireland and have pointed out the success which has attended the practice of making household science and household hygiene part of the regular university course for women in many universities in the United States and Canada, and of the adoption of the same plan at King's College in connection with the University of London. I trust that the ancient College within whose hospitable walls we are now assembled will adopt the system before long, and in the meantime we rejoice that a beginning is to be made

in this direction at University College, Cork, this next session, under the guidance of Professor Windle, and that the authorities of the University Colleges here and at Galway are also favourably considering the question. People are often apt to smile at the idea of making woman's work in the home and health in the home university subjects, but very little reflection will suffice to convince those who look into the matter how worthy they are of such a place. Home life and work are no longer the simple affair of bygone days, when the mistress of the household knew exactly about every process through which the food and clothing she provided for her family went before she used it. Now, while food plays so admittedly an important part in the health of the people, what do we know of the processes through which it goes before it reaches our tables. We know too well how difficult it is to obtain pure milk, pure butter, or pure bread from pure flour, or jams made with real sugar from fresh and good fruit. And we know, or we have an idea, of what the adulteration of bread, milk, butter, and sugar means in deterioration of health.

Yet how defenceless is the ordinary housewife in these matters—and what does she know of the proper discharge of a house and of systems of water supply and ventilation on which she and her family will be dependent according to her choice of a house! How little instruction does the average girl have of the effects wrought by bacteria in water, earth, and air, in stored food stuffs, and in the tissues of the living body, or of the conditions which permit of the access of noxious bacteria or of those which will ensure our protection!

The complex character of modern household appliances and of the systems of heating and lighting demands knowledge on the part of the housewife, unless she is to be in the hands of servants and tradesmen, and the study of economics would save many mistakes in the individual household as well as in the relations of each family and household with the world outside.

Here, then, we see the need of study of biology, chemistry, science, taught so as to lead to their application to human life—add to these a course in business habits and in home arts, and we have a pretty wide field for a university course added to the Arts or History course, or whatever may be selected.

I believe that the opportunity that such courses would give would attract many girls to the university who never think of coming now, and that it would greatly advance the desirable object of girls of the leisured class wishing to follow up their school life by a university course. If once they realised how such studies carried out on university standards would revolutionise the aspect of home life and household management, filling every daily duty with vivid interest and opening out endless opportunities of carrying the studies of college years into the region of practical life, and applying them for the benefit both of the individual home and for social service generally. We have a good example shown of the interest created by such courses by the experience of Alexandra College. But many will say: Granted! household sciences and arts and economics must be taught, but surely their place is at the Technical Colleges and Institutes and in the Secondary Schools? Yes, doubtless they ought to be taught at these institutions, but they must form a part of the university education of women if we are to get their full value. It stamps these household sciences as worthy of the prolonged and careful study of those who aspire to the highest kind of education attainable in the country, and these in time would help to abolish the baneful notion that the care of the house and the service of the home is on a lower plane than other trades and professions, and that there is something menial in their pursuit. We have to abolish this idea root and branch before the great problem of domestic service is solved, and nothing will help so much as to give these studies the place of honour in the education of women, from the primary school up to the university.

And not only will this react on the home, reviving the

interest and the potency of its influence, but it will also reach out to the ever-widening fields of Social Service, which depend so largely on the trained work of capable educated women of high ideals.

Much attention is being paid to the specific education of women of all classes in every country, as may be seen by the valuable volumes of special reports issued by the English Board of Education, and we note with interest in the current number of the Department of Agriculture and Technical Education's Journal a paper on the training now being systematically given to farmers' wives and daughters in Belgium, and their organisation into groups to promote health, happiness, and prosperity in the rural parts of the country.

We see the same process going on in Ireland under the Department, the Congested Districts Board, the Industrial Schools, the Secondary Schools, and in many of the Primary Schools. There is a great call to women to come forward to do their part in the building up of the health and prosperity of all countries, and there is a growing sense of the loss sustained by any country which does not claim the service of its women citizens alongside of the men in every department of life. I can answer for it that here in Ireland the women are responding splendidly to the summons. The women who have in the short space of three years given Ireland the proud designation of "a country of open windows" can do anything, more especially when they can rely on the men to back them up. They have caught a glimpse of what it means to renew the health of a country by uplifting the standard of home life and happiness and prosperity in every particular, and of uniting all the members of the individual families as well as the men and women and children of the whole country in this high and patriotic endeavour.

We in Ireland thank you, members and delegates of the Royal Institute of Public Health, for coming across the sea to help us to fulfil our ideals, and we shall be indeed glad if we can render you any service in return

during the days you spend in our midst. Our Local Committee will spare no trouble to meet your wishes and to make your visit pleasant, and the names of the Presidents and Vice-Presidents of the Sections and of the readers of papers ensure a most interesting and valuable Congress. Let me conclude as I began with hearty thanks for the privilege you have conferred on me by making me your President.

ART. IX.—*The Pupil and the Mechanism of its Reflexes in Health and Disease.*[a] By JOHN H. WOODROFFE, M.D. Dubl.; late House Surgeon, Noble's Isle of Man Hospital, Douglas.

MUCH help in general diagnosis is often obtained by careful examination of the pupils, their size, and action under the influence of various stimuli, and in this paper it is intended to consider those extra-ocular conditions, which affect the movements of the iris, rather than those which fall more properly within the province of ophthalmology.

Before proceeding to the consideration of the conditions which cause variations in size of the pupil it is first necessary to give a short account of the mechanism by which these variations in size are effected.

The iris is composed of unstriped muscle fibres, elastic fibres, connective tissue, numerous blood vessels, nerves; lymphatics, &c. The muscle fibres are disposed in two main sets. The greater number run in a circular direction, and thus their contraction causes diminution in the size of the pupil.

The existence of a radial set of fibres, causing, by their contraction, a dilatation is denied by many, but for the most part they are now admitted to be present.

The nerve supply of these muscles is somewhat com-

[a] A Thesis read for the Degree of Doctor of Medicine in the University of Dublin, July 5, 1911.

plicated. The supply for the circular fibres or sphincter muscle is from the anterior part of the nucleus of the oculo-motor nerve, *viâ* the third nerve to the orbit and ciliary ganglion; here new post-ganglionic fibres arise, and are carried forward in the short ciliary nerves to form a circular plexus in relation to the attached border of the iris, whence the muscle is supplied.

The course of the fibres to the dilator muscle is more uncertain. Arising probably in the anterior part of the floor of the aqueduct of Silvius, they pass down the spinal cord to the so-called cilio-spinal centre, situate in the lower part of the cervical, and upper part of the dorsal divisions of the spinal cord. Thence *viâ* the eighth cervical and first and second dorsal nerves and corresponding rami communicantes they reach the sympathetic at the level of the first thoracic ganglion. Fibres then pass up in the cervical sympathetic to the superior cervical ganglion. Thence by post-ganglionic fibres the path is continued to the Gasserian ganglion and by the ophthalmic branch of the fifth and long ciliary nerves to the iris.

While most admit the existence of a dilator set of muscle fibres in the iris it is stated by some that contraction of the muscle coats of the blood vessels (with which the iris is so well supplied) is the main factor in active dilatation, while others again attribute it to recoil of the elastic fibres.

The mechanism of the pupil reflexes still remains to be considered. These are commonly said to be four in number, and are spoken of as: (1) the light reflex, (2) the consensual reflex, (3) the accommodation reflex, (4) the convergent reflex. Of these, two only—the light reflex and the consensual reflex—are properly so-called; the others being rather associated movements than true reflexes.

Taking first the light reflex, and endeavouring to trace out the reflex path, it is found that here again the anatomists are at variance with one another. The most widely accepted view is, however, as follows:—

Each retina is, anatomically speaking, divided into

two by a vertical line which diverges to include the macula. From each half the fibres run together in the optic nerve until the chiasma is reached; here a decussation takes place, with the result that the fibres from the left half of each retina pass on to form the left optic tract, and those from the right halves to form the right optic tract.

Diverging and continuing their course external to the crura cerebri, the fibres of these tracts terminate on each side in the anterior corpus quadrigeminum, the external and internal geniculate bodies and the pulvinar of the optic thalamus.

Those fibres which terminate in the anterior corpora quadrigemina are the fibres of visual sensation as distinguished from those of visual perception which communicate with the centres of visual perception situated in the occipital lobes.

It is, however, by the fibres of visual sensation that the light reflex is effected.

From the centres of visual sensation in the quadrigeminal bodies new efferent fibres, known as Meynert's fibres, pass to the anterior portions of the oculo-motor nuclei, whence motor fibres proceed to the sphincter muscle of the iris as already detailed. Commissural fibres also connect the centres of visual sensation of each side and also the two oculo-motor nuclei.

The importance of these commissural fibres will be seen when the consensual light reflex is considered.

Bernheimer and von Gudden state that the external geniculate bodies play the part usually assigned to the anterior quadrigeminal bodies; and the latter, in addition asserts that the fibres of the reflex path are thinner than those concerned in visual perception, and may be distinguished as a separate and distinct tract as far forward as in the optic nerves.

Mendel has asserted that the ganglion habenulæ and the pineal gland are concerned with the light reflex, but his conclusions have not received much support.

The light reflex is obtained as follows :—The eye which is not under examination should remain shaded the whole time; the other, after being excluded from light for some moments, is exposed; a preliminary dilatation results, and after about half a second this dilatation gives place to a condition of extreme contraction, followed by moderate dilatation, moderate contraction, and so on, until after some gradually decreasing oscillations the pupil comes to rest in a contracted condition.

This oscillatory movement is known as "hippus," and is due to the fact that each successive contraction, in that it diminishes the amount of light reaching the retina, is in itself the stimulus for a succeeding dilatation.

The phenomenon is, in fact, exactly comparable to the gradually diminishing swing of a pendulum once set in motion, which, in that it over-shoots the position of equilibrium, furnishes by its new position the potential energy required for the return movement.

The consensual light reflex, in that it is intimately associated with the foregoing, is the next to come under consideration, and may be rapidly dismissed. It is, in short, the light reflex occurring in the eye unstimulated by light, and its explanation lies partially in the fact that the fibres from each retina pass half to one side and half to the other side of the brain, and partially, it may be, in the fact that, as has been already stated, commissural fibres connect the oculo-motor nuclei of each side, and also run between the centres of visual sensation. The importance of these commissural fibres is shown by the fact that a lesion of one optic tract causing homonymous hemianopsia of loss of sight in corresponding halves of the retinæ does not destroy the consensual reflex.

The accommodation and convergent reflexes are improperly so-called, as they partake of the nature of associated movements and not of reflexes.

With accommodation for near objects, convergence takes place, and with convergence contraction of the pupil. There is thus an associated action of ciliary muscle,

sphincter iridis, and the internal rectus. Furthermore, it has been shown that if accommodation is effected without convergence, no contraction is observed; but that with convergence contraction of the pupil takes place. Some investigators—Aubert, Priestley Smith, and Hensen—have suggested that there is a common centre for convergence, accommodation, and contraction of the pupil, and this view is supported by the discovery of such a centre in dogs.

The normal size of the pupil is the result of the well-balanced action of various forces—the action of the third nerve in causing contraction of the sphincter, the sympathetic in stimulating the dilator muscle, and inhibiting the action of the sphincter as well as determining the amount of blood in the numerous blood vessels of the iris; and lastly the passive action of the elastic fibres in the iris must not be overlooked.

While light is the chief stimulus for contraction of the pupil, dilatation is much more easily effected by external conditions. Sensitive stimuli, such as touching the skin on the side of the neck—a pin prick—loud noises in certain people, all cause a dilatation of the pupil. For these reflexes the sympathetic is largely responsible, although the exact explanation is as yet undecided.

Psychical stimuli in many produce dilatation of the pupil, as is often observed in cases of sudden fear, anger, or the reverse emotions.

Again, the extreme sensitiveness of the pupil is seen in the dilatation occurring with deep inspiration and expiration—a result probably depending on the carbon dioxide content of the blood and the stimulation of the pupil dilating centres thereby.

The influence of the fifth nerve on the iris is a matter of considerable dispute—some attributing to fibres of the sympathetic in the fifth nerve the effects supposed by others to be due to the nerve itself.

Before passing on to the influence of disease on the size of the pupil, the action of drugs claims some attention.

These are divided into two main groups, mydriatics and miotics, according as they cause mydriasis or dilatation or miosis or contraction.

Atropine—the best known of the former—acts by paralysing the endings of the third nerve in the sphincter, and, in addition, it is stated by some, stimulates the pupillary branches of the sympathetic. Duboisine, homatropine, daturine, and some others act in a similar manner.

Cocaïne causes mydriasis only by acting on the sympathetic, the dilator and vaso-motor fibres of which it stimulates.

Of miotics eserine is the most widely used, and is in its action a direct antagonist of atropine, stimulating the endings of the third nerve while paralysing those of the sympathetic.

Morphine, pilocarpine, and muscarin are similar in their effect.

A subject of wide and general importance is the effect on the pupil of those drugs which produce anæsthesia, and this pupillary reaction is of immense aid in their administration. Thus the dilatation in the first stage of chloroform anæsthesia is due to a stimulation of the pupil-dilating centre, the second stage marks the onset of paralysis of the above. The pinhole pupil indicates stimulation of the pupil-contracting division of the third nucleus, while the succeeding dilatation tells the observer paralysis of this centre has supervened, and the final wide dilatation spells bulbar paralysis and imminent danger.

Passing from the physiological to the pathological it is found that in dealing with mydriasis and miosis the result of disease, they may in each case be divided into two groups—irritative and paralytic miosis and irritative and paralytic mydriasis.

Irritative miosis is due to some process irritating those fibres or that part of the nucleus of the third nerve concerned in the movements of the pupil. It is distinguished, according to Lesser, by being unaffected by

light or convergence, but reacts to drugs of the miotic or mydriatic class.

Amongst the causes of irritative miosis may be cited (1) the earlier stages of inflammatory conditions of the brain and of its meninges, (2) the earlier stages of tumours interfering with the third nerve or its nucleus, and (3) a prolonged effort of accommodation. In fact, miosis, when of cerebral origin, is due to irritation, and when of spinal origin is of the paralytic type, the converse holding good in cases of mydriasis. Paralytic miosis may be distinguished by the fact that the pupil reacts both to light and with convergence—dilates but slightly on application of a mydriatic, but contracts to pin-point size when under the influence of a miotic drug.

While caused by many lesions of the cervical spinal cord, paralytic miosis is of particular interest with reference to tabes dorsalis, in which a contracted pupil is frequently a very early sign. A condition of miosis in which the pupil still reacts to light and accommodation indicates that the disease has proceeded no higher than the medulla. Later, when Meynert's fibres have been destroyed the light reflex path is no longer open. The light reflex is destroyed, but contraction with accommodation being of the nature of an associated movement, this can still take place. This constitutes the Argyll-Robertson pupil.

Bevan-Lewis states that although in some cases a lesion of Meynert's fibres may explain the Argyll-Robertson pupil it cannot do so in all, as some cases of a unilateral Argyll-Robertson pupil have been observed. He, therefore, concludes that the lesion must be nuclear.

In general paralysis of the insane paralytic miosis is frequently seen at an early stage, but when the intimate relationship of general paralysis and locomotor ataxia is considered the explanation is not far to seek.

Another important cause of paralytic miosis, but one which is usually at first a cause of mydriasis, is pressure on the cervical sympathetic, by aneurysm, tumour, or other cause—first irritating, and then destroying it.

Irritative mydriasis is the converse of paralytic miosis, and while the latter is due to paralytic processes in the cervical spinal cord the former is due to an irritative or stimulating lesion in the same part. Such a pupil reacts to light with convergence, is readily dilated by mydriatics, but slightly convergent by miotics. This may be caused by any early inflammatory or sclerotic process in the upper part of the spinal cord or anything causing stimulation of the cervical sympathetic.

Paralytic mydriasis is the converse of irritative miosis—if due to a lesion between the third nerve and the iris the reflexes to light, both direct and consensual, are absent, as is also the contraction accompanying convergence. If, on the other hand, the lesion is situated in the afferent path of the light reflex, between the retina and the centre for contraction, only the direct light reflex is interfered with.

With the exception of some advanced intra-cranial lesions, paralytic mydriasis is most often due to purely ocular trouble, such as glaucoma, advanced retinitis, or optic neuritis. Such a pupil is obviously unaffected, or nearly so, by drugs of either the mydriatic or miotic group.

In these pages an attempt has merely been made to consider, in the light of anatomical and physiological research, some few of the numerous extra-ocular pathological conditions which are reflected in their effect upon the pupil. To include them all would transgress by far the limits of this paper.

ART. X.—*Artificial Eruptions.*[a] By ARTHUR F. BERNARD SHAW, M.D. Univ. Dubl.

ARTIFICIAL eruptions include all those skin lesions produced by the action of substances which are foreign to the body. In considering them it will be found that they fall into two

[a] A Thesis read for the Degree of Doctor of Medicine in the University of Dublin, July 5, 1911.

great groups :—I.—Those which produce eruptions by coming into direct contact with the skin. II.—Those which, following ingestion, produce eruptions ; the manifestation of their toxic effect on the system being the production of certain lesions on the skin.

External Agents.—The agents which fall under this heading may be of—(*a*) animal, (*b*) vegetable, or (*c*) inorganic nature. Among the animal irritants are—(*a*) parasitic forms—viz., the various forms of Pediculi, Pulex irritans, Sarcoptes and Acarus. The phenomena produced by these animals are so familiar that it is unnecessary to describe them. Of rarer forms there is the harvest-bug (*Leptus autumnalis*), which occasionally gives rise to inflammatory papules by boring into the skin ; the larva of the horse bot-fly (*Gastrophilus equi*), which makes a slightly raised pale red line that travels over the body with great rapidity. These lines are characteristic inasmuch as they never branch or bifurcate, though two lines may cross one another. There is also a remarkable epidemic urticaria, in some parts of Germany, caused by the procession of certain forms of caterpillars over the skin. The lesions are particularly irritative, and render the districts infected almost uninhabitable.

Then there are (*b*) non-parasitic forms—viz., certain fishes—jelly fishes and insects. The most common fishes in this country which produce skin lesions are the Great Weaver, the Little Weaver, and the Sting-Ray. These produce their effects by stinging, and they do this by means of sharp spines on their fins. Each spine at its base is connected with a poison-gland. The spine, having pierced the integument, provides the path by which the poison passes into the wound. The most common site for these lesions are on the hands and feet. The skin about the puncture becomes swollen and hyperæmic ; bullæ form containing serum or pus, and the affected area may even become gangrenous. If the poison spread in the tissues the whole limb becomes enormously swollen and erythematous ; and, at the same time, there is great pain. As a result the patient often falls into a state of collapse or delirium. Usually, however, the inflammation

subsides in a few days. Treatment of the wound should be carried out on general principles. There are no satisfactory antidotes—though iodine and turpentine are of some value. On the other hand ammonia and alkalies are quite useless. Lastly, experimental work on the poison of these fishes shows that it produces gangrene of the tissues, local paralysis and hæmolysis.

Many species of jelly-fish are also capable of producing cutaneous lesions by means of the stinging cells attached to their tentacles. These eruptions are most frequently seen in bathers during the summer. The most common features is the presence of a localised erythema—often linear—on some part of the body corresponding with the number and distribution of the tentacles which have come into contact with it. In many cases the condition is purely local, and the patient complains of no symptoms whatever ; in others there may be some pain in the part with irritation and a feeling of heat. In these forms the erythema disappears, leaving no traces, in a few days. But in others the condition may be very severe, as is shown by the following case :—The patient received, while bathing, a severe sting on the right leg, which caused him much pain, and was followed very soon by an erythema of the part stung. The next day the patient felt ill and had a severe headache. His temperature rose to 100 , and his whole body, with the exception of his face, was covered with a diffuse erythematous rash very closely resembling that of scarlatina. He was compelled to remain in bed, for he felt his whole body tingling. The next day he felt much better, and the rash disappeared completely on the third day.

In this case the only treatment given was a purgative and plenty of water by the mouth.

It is evident from this account that the phenomena were identical with those which follow the absorption of a toxin into the system ; and it must therefore be assumed that in this case the poison of the jelly-fish gained an entrance into the system by way of the local wound. Besides its ability to produce erythematous conditions the jelly-fish toxin can bring about urticaria. The urticaria may be localised to the

seat of injury, or it may be diffuse. Of the two the localised form is the more common, whilst the production of erythema is more frequent than urticaria. Lastly, the variety of the cutaneous lesion, and also its severity, probably depend upon the genus of the jelly-fish.

Bees and wasps by their stings produce either a local erythema or urticaria around the seat of puncture. Both varieties are accompanied by considerable pain in the part affected. Erythema is more likely to occur where the skin is coarse and tough ; whilst urticaria is more frequent where the skin is delicate. In such places as the eyelid, where the subcutaneous cellular tissue is lax there is frequently a considerable amount of œdema.

The specific action of these stings is due to the presence of formic acid in the poison introduced.

Treatment is directed to cleansing of the wound and the application of soothing lotions.

As typical examples of the effect produced by vegetable irritants on the skin mustard and rhus may be taken. The most familiar action of the former is the production of erythema and vesication, which may pass on to an actual dermatitis, or even ulceration.

Rhus is used in Japan for polishing furniture. It is highly irritating, but only certain persons are susceptible to its action. Its most common effect is an eczematous eruption with intense itching ; even the hands, arms and face may be enormously swollen. In more severe cases a violent dermatitis occurs with more or less marked constitutional symptoms. Lastly in this group may be mentioned nettles. Contact with this plant always produces a local urticaria.

The third class—namely, inorganic irritants—produce their effects by their physical, rather than by their chemical, properties. Thus cold produces the familiar chilblain or erythema pernio, which may advance to the condition of frost-bite.

Again, the sun produces erythema solare or "sun-burn," and this is considered to be due to the light rather than the heat of the sun—the violet rays being the actual agent in its

production. The action of these rays is varied. In people who have fair, dry and delicate skins an erythema is produced which disappears in a few days, and may or may not be followed by desquamation. In others who have a dark moist skin the erythema is not well-marked, but it is followed by "bronzing," which may last for many weeks. The nature of this "bronzing" is probably that of a diffuse lentigo. As an example of the effects of the sun on those who have a fair, dry and delicate skin the following case may be cited:— A man, aged fifty, sat for about two hours with his fore-arms exposed to the sun. In the evening both of the exposed areas showed a violent erythema, they were visibly swollen, hot to the touch, and on pressure there was œdema. The only subjective symptom was an intense feeling of heat in the parts. The condition subsided in two days; there was no subsequent desquamation or bronzing. The only treatment given was a cooling cream.

Another condition which is very often, though not invariably, due to the action of the sun's rays is "freckles," or lentigo. Pathologically, "freckles" are patches formed by the local deposit of pigment in the basal layer of the epidermis. The colour is usually yellow or yellowish brown, occasionally sepia. They are most common in childhood, especially in those who have a fair delicate skin. Their most frequent situations are the face, particularly about the nose, cheeks and the backs of the hands. Most marked in summer, they tend to fade in the winter. They very rarely call for treatment.

More important than these, however, are the effects on the skin of other forms of light energy—foremost among them being the Röntgen rays. Exposure to these rays results in a severe dermatitis which may be acute or chronic. The acute form results from one or more over-exposures. Its degrees of severity are comparable to the first three degrees of ordinary burns. Thus there may be—firstly, erythema with swelling and desquamation; secondly, erythema with vesication; thirdly, destruction of the epidermis with ulceration. These lesions are extremely painful and leave deep scars when they

heal. The condition is usually limited to the parts exposed, stopping abruptly where the skin is covered by clothes. There is great liability to periodic recurrences.

The chronic form of dermatitis affects those who are constantly exposed to the rays over long periods. It occurs most commonly on the back of the hands, and begins with erythema, pigmentation and telangiectasis. In time the skin becomes thin, roughened and fissured; local hyperkeratosis occurs, and the growths thus formed are very liable to become the seat of epithelioma. The nails also are affected, becoming pitted, striated and brittle; they may even exfoliate. In the later stages the condition is extremely painful, and the chief danger lies in the liability to malignant changes.

Internal Agents.—Among eruptions caused by internal agents are included all those produced by substances which are introduced in some way into the body. They may be divided into three classes:—(*a*) Substances taken as articles of diet; (*b*) drugs given for medicinal purposes, and which may be taken by the mouth, by inunction, or by hypodermic injection; (*c*) substances of an organic nature which are inoculated—viz., serums and vaccines.

Undoubtedly the most important factor in determining the appearance of an eruption and the form which it assumes is individual susceptibility.

Again, the eruptions caused by drugs are so varied that they do not permit of any classification; but they are seldom multiform at a given time, though almost every variety may be exhibited in their course.

With regard to the method in which drugs produce eruptions various theories have been advanced. Some authorities say that when from any cause there is diminished renal activity, the skin assumes the functions of the kidneys, and the drug in passing through the cutaneous glands irritates the integument and produces lesions of various kinds. This theory postulates that before an eruption can be produced the drug must have accumulated in the body to a greater or less extent. This, however, is not the rule, for the smallest dose of a drug will produce an eruption in some people, while in other cases very

large doses of the same drug may be taken for a long time without producing any effect whatever in the skin.

Behrend claims that drug eruptions, with some exceptions, are due to the presence in the blood of some foreign substance generated by the drug. In other words there is some chemical alteration in the composition of the blood. If this were the case one would expect to find cutaneous eruptions wherever the blood circulates. But, on the contrary, we know that drug eruptions are peculiar in their distribution, and are often confined to particular parts of the cutaneous surface.

A more probable explanation, and one which accords very closely with clinical facts, is the assumption that the process is angioneurotic in character. It is a generally recognised fact in dermatology that the mechanism of vaso-motor disturbance is sufficient to account for—in most cases at any rate—the production of the series of lesions ranging from erythema to gangrene. Now it is these very series of lesions that drug eruptions simulate. Further, it has been pointed out that a large proportion of the medicinal agents which determine an eruptive disturbance act markedly on the nervous system. From this point of view individual susceptibility, which plays such an important part in drug eruptions, receives its explanation; as also the peculiar arrangement and distribution which is so common in these lesions. In brief, it may be stated that drug eruptions arise either in response to irritation of peripheral nerve endings, when the medicinal substance is applied externally to the skin, or to irritation of the central vaso-motor control, as when the drug is taken internally.

It is impossible to deal with all the substances that may produce eruptions, and mention can be made only of the commonest and most important ones.

In Class A are substances taken as articles of food. Among these the chief place must be assigned to shell-fish—especially mussels, crabs and lobsters; less important are fruit, oatmeal, salt meat and mushrooms. The most common lesion produced by these is urticaria, and in no condition is individual susceptibility more marked. It is a well-known fact that some

people can indulge freely in these articles of food without producing any affect on the skin , whilst in others the smallest quantity produces the most marked results.

In Class B the two most important and commonest drugs are bromine and iodine, and their compounds.

The most familiar eruption produced by bromine salts is a papulo-pustular one—bromic acne ; and it is said to occur in 75 per cent. of cases. Bromic acne bears a considerable resemblance to acne vulgaris. Unlike the latter, however, the bromic lesion does not confine itself to parts rich in sebaceous glands, and it always develops without the antecedent existence of comedones. It shows a marked preference for hairy parts—viz., the forehead, neck, face and shoulders. The condition persists as long as the drug is given, and increases if the dose is increased. Almost any other primary lesion may be produced ; and in the legs large elevated areas resembling condylomata may be formed.

The iodides also give rise to a variety of lesions, including erythema, papules, urticaria, vesicles and bullæ.

The papulo-pustular form is apparently the most common, and chiefly affects the face, neck, chest, shoulders and arms. It usually appears when the drug has been given for a week. The papulo-vesicular form, owing to its shotty feel and umbilication, may resemble small-pox.

The eruption disappears when the drug is suspended ; but in one case of a man who was given 5 grs. of potassium iodide three times a day for a suspected gumma, the eruption disappeared when the dose was raised to 10 grs. three times a day. In two other cases, however, such treatment failed, the eruption being made worse.

Iodoform when used in surgical dressings is said sometimes to cause irritation of the skin—chiefly erythema and eczema. But this must be rare in proportion to the frequency with which iodoform is used for such purposes.

Arsenic plays a very important *rôle* in the production of skin eruptions. When applied externally it may set up a severe dermatitis—erythema followed by vesicles and pustules. When given internally it may give rise also to dermatitis, or,

more commonly, a greyish or brownish pigmentation. Prolonged administration of the drug may lead to keratosis of the palms of the hands and soles of the feet. These are very liable to become the seat of epithelioma. Copaiba, owing to its frequent administration for gonorrhœa, is a common source of skin eruptions. The commonest lesion is the presence of discrete erythematous papules generally seen on the wrists, ankles and knees; very often it spreads over the whole body.

Mercury, whether in the form of corrosive sublimate or calomel, often produces a dermatitis when applied externally. Corrosive sublimate when applied as an antiseptic dressing before operation not uncommonly sets up a mild dermatitis inside of twenty-four hours.

Opium sometimes gives rise to intense pruritus. In addition to this it may cause a diffuse scarlatiniform or morbilliform rash, which is followed by desquamation.

Aspirin is a drug which does not appear to be mentioned in the literature as a cause of skin eruptions. But the following is a case in point:—A young girl who complained of headache was given 10 grs. of aspirin in the evening. The next morning her whole body, except her face, was covered by a diffuse scarlatiniform rash; there was no elevation of temperature, and no desquamation. The condition had faded completely in three days. The explanation of this may be that aspirin is one of the salicylate group, which is known to sometimes produce a rash resembling scarlatina.

Among other drugs which act as severe irritants are chloral, aconite, arnica, cade oil, cantharides, phenol, chrysarobin, croton oil, tar, sulphur, turpentine.

Among those producing erythema and exanthematous rashes are:—Belladonna, quinine, the salicylates, antifebrin, antipyrin, boric acid, iron, lead acetate and carbonate, nux vomica, phenacetin, stramonium, sulphonal; whilst nitrate of silver produces a permanent greyish-black pigmentation termed argyria.

The ordinary enema frequently produces a diffuse erythematous rash which affects principally the neck, chest and trunk. It appears a few hours after the injection, and is far more common in women than in men.

In Class C the process of vaccination is the best known cause of skin eruptions. These eruptions may be due to pure vaccine inoculation or to mixed inoculation. In the first class they may be just secondary local inoculations—urticaria, erythema, papulo-vesicular, or generalised vaccinia; in the second class they depend, of course, on the nature of the additional virus, and so may be pyogenic, syphilitic, or tubercular. In one case of a child, three months old, there was a papulo-vesicular eruption first noticed on the eighth day, and involving chiefly the limbs, but also the face and trunk to a lesser extent.

Tuberculin sometimes gives rise to a scarlatiniform or morbilliform rash, but this appears to be rare.

Of the antitoxins, the diphtheritic is the best known for producing eruptions. The rash may be urticarial or erythematous. In eight cases observed, seven were urticaria and one almost purely erythematous on the average. The eruption was observed about the sixth day in these cases. It affected principally the body and the lower limbs. In one of the cases of urticaria the itching was especially pronounced.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

At a meeting of the College held on Thursday, July 27th, 1911, the following gentlemen, having passed the requisite examinations, were admitted Fellows:—William Ainslie, M.B., Ch.B., Edinburgh; Richard Charles Alexander, M.B., Ch.B., Edinburgh; John Stott Beedie, M.B., Ch.B., Turriff; William Rome Cammock, M.B., Ch.B., Rutherglen; Thomas Gilray, M.B., Ch.B., Wellington, N.Z.; Thomas Arthur MacGibbon, M.B., Ch.B., Hawera, N.Z.; Eric Reginald Delme Maconechie, M.B., Ch.B., Edinburgh; Robert Morison, M.B., Ch.B., Edinburgh; Michael Charles Frederick Morkane, M.B., Ch.B., New Zealand; Gavin Denholme Muir, M.B., Ch.B., Glasgow; Andrea Francis Honyman Rabagliati, M.B., Ch.B., M.D., Yorks; Hugh Jones Roberts, M.D., M.R.C.S.Eng., Penygroes, North Wales; Basil Lyons Thurlow, M.D., M.B., Ch.B., Tunbridge Wells, and Herbert John Walker, M.R.C.S.Eng., L.R.C.P.Lond., Brighton.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

The Prevention of Infectious Diseases. By ALVAH H. DOTY, M.D., Health Officer of the Port of New York. New York and London: D. Appleton & Co. 1911. Cr. 8vo. Pp. 281.

DR. DOTY has drawn on his wide experience as Medical Officer of the Port of New York, and on his personal investigations to compile a practical and readable handbook, which will prove a safe guide to all who have to combat the spread of disease.

The author rightly points out that many theories which have long been accepted are really fallacious, and so aid rather than hinder the spread of disease. One of these is the belief in fomites.

Egyptian rags consist principally of the worn-out garments of the natives, which usually consist of one piece, and are worn next the skin; yet although some form of infectious disease is almost always present in Egypt, careful statistics present no evidence that those in close and prolonged contact with these rags in the sorting-room contract infectious disease through this source. The same is true of paper manufacturers in the United States, and of dealers in secondhand clothes.

Further proof that persons, and not things, transmit disease is shown by careful examination of school children. The marked increase in cases of diphtheria, measles and scarlatina at the commencement of the school year was found not to arise from infected clothing, but from mild and unrecognised cases of the disease.

Dr. Doty wisely objects to the foolish custom of closing schools in the presence of an epidemic. Children who remain in school and are subject to careful surveillance are better protected than if about the streets, mixing indiscriminately with others.

The proper course is thorough inspection of all the children on their arrival at school each morning. This must be done by medical men, who may be able to detect early or suspicious symptoms of disease.

It is most important to recognise personal infection, as the usual "disinfection" of stools, &c., is practically worthless. The author has found that it has taken chloride of lime or other disinfectant twenty or more hours to penetrate and disinfect about one-eighth of an inch of a fæcal mass. Only heat or thoroughly mixing every particle with a powerful disinfectant afford sure methods of rendering infected discharges harmless.

Too much emphasis cannot be given to the statement that it is the discharges, and the material which contains the discharges of those who are actually sick with infectious disease, which should be regarded as the media of infection.

The fallacy that desquamation is a potent factor in the transmission of scarlet-fever and measles is pointed out, the period of infection being rather during their early or active stages, and later if discharges are present.

The importance of temperature as a test of the presence of infectious disease is clearly pointed out, and the technique of temperature taking at Quarantine Stations is described.

The layman's popular fallacy that a fireman or cook may have an "occupation" elevation of temperature is disproved by a series of observations; and so these classes get no exemption from the common fate.

"Prevention of infectious diseases" may be safely recommended as a sane statement of modern Public Health practice.

Bulletin of the Ayer Clinical Laboratory of the Pennsylvania University. Vol. I., No. 6. Philadelphia. 8vo. Pp. 78.

A LIST of the contributions to this number of the "Bulletin" is a revelation of the zeal and thoroughness with which scientific Medicine is being studied by our brethern in the United States of America. There are six practical papers giving clinical histories and pathological conditions as seen

at the autopsy, and verified in the laboratory. Just the class of papers which are best calculated to promote rational therapeutics. The first article, "Retrogression in a case of Lymphosarcoma," claims attention since spontaneous retrogression is rare, and also from the fact that during retrogression the condition of the patient almost always becomes worse. It may be that during the autolysis of tumours that degeneration of tissue produces artificial ammonias which like ptomaïns are toxins. "Blood-pressure in Cerebro-Spinal Meningitis" as a paper full of details justifies the author's conclusions.

Heightened intracranial tension appears to be an almost constant phenomenon in epidemic cerebro-spinal meningitis; blood-pressure seems to bear some relation to the severity of the disease; withdrawal of cerebro-spinal fluid by lumbar puncture has no constant effect on the blood-pressure. Dr. Krumbhaar contributes an article on "Adams-Stokes' Syndrome," in which he demonstrates that the condition may co-exist for years with little or no lesion of the bundle of His; that there may in some cases be two or more contributing causes, both functional and organic. It is now sixty-five years ago since that great clinician Stokes published an article in our pages on this subject, in which he supplemented the work of his friend Adams, who in the old *Dublin Hospital Reports* had outlined the principal features of the syndrome, and it was a happy thought of Huchard (*Traités cliniques des Maladies du Cœur*) to associate their names with the group of symptoms. Aortic insufficiency, by Dr. Longcope, is chiefly concerned with the effects of syphilis on arterial walls; and his paper is a further and valuable contribution to our knowledge of the terrible effects produced by the disease long after the patient believes he is free of it. The number concludes with an article on tracings from aneurysms of the ascending aorta, which is a splendid example of clinical research.

The illustrations—some of which are coloured—and the printing are excellent.

Extra-peritoneal compression of the common iliac artery in coxa-femoral disarticulation with amputation is the subject

of a pamphlet by Dr. R. Martin Gill, of Malaga. The author compares his method of hæmostasis with that of M'Burney in similar cases. The operation in its initial stage is almost identical with that for exposure of the kidney, the length of the incision depends on the amount of subcutaneous fat, to which it is proportionate. All the small vessels are securely ligatured as the operation proceeds, as the author considers that hæmostatic forceps in the wound interfere with the necessary manipulations. The subperitoneal fascia being reached and the wound held well apart by retractors, the twelfth dorsal nerve is found and traced to the root of the lumbar plexus, where by a little careful manipulation the iliac vessels may be exposed. The yellowish white colour of the artery serves to distinguish it from the dark blue colour of the vein. Compression of the vessel is now made with the fore and middle finger against the bodies of the vertebræ. That the operation is well adapted for the object for which it was introduced is clear; but in all such cases the element of time is a great factor, especially when the patient is under an anæsthetic and is advanced in years. We would just like to add that it is most gratifying to find English surgical literature so familiar to Spanish students. In this pamphlet of Dr. R. Martin Gill we find not alone a familiarity with current medical literature, but also with the classic works of Pott, Holmes, and others.

Studies in Cardiac Pathology. By George William Norris, A.B., M.D., Physician to the Medical Out-patient Department of the Pennsylvania Hospital, Fellow of the College of Physicians of Philadelphia, &c. Philadelphia and London: W. B. Saunders Company. 1911. Large 8vo. Pp. vii + 233.

The outstanding feature of this work is the beauty of the illustrations, eighty-five in number. In his preface, the author acknowledges the courtesy of the respective pathologists of five of the most important hospitals of Philadelphia, by which he was afforded the opportunity of photographing specimens in the several museums of those

hospitals. The result has been an unique collection of pathological illustrations of the different valvular and mural diseases of the heart.

The photographs are exquisitely finished as plates, and the greatest care has been taken to perfect the focussing in every case. Only in a few instances (Plates 46, 47, 48, 73, and 84) have anatomical relations and structures been designated by marginal notes or words to which lines are drawn from the part indicated. This may render the interpretation of the photograph somewhat difficult in some cases, but it bears testimony to the author's artistic taste. And after all, a full descriptive legend will be found under each plate throughout the book.

But there is another aspect from which we may view the work, and that is its literary and statistical side.

"In order to enhance the value of the exhibit," writes Dr. Norris in his Preface, "considerable data bearing on the pathology of cardiac lesions have been added." He modestly tells us that "no attempt has been made to publish a complete work on the pathology of the heart, the text being mainly in the form of an explanation and an elucidation of the illustrations, and but little space has been devoted to the microscopic tissue changes. The result," he thinks, "is perhaps open to criticism as being too statistical in nature." Well, we cannot altogether agree with him in this, for his pages are a storehouse of information, not only statistical, but clinical and pathological also.

The subjects illustrated are, in sequence, acute and chronic endocarditis; diseases of the aortic, mitral, tricuspid and pulmonary orifices; acute and chronic pericarditis; cardiac hypertrophy and dilatation; cardiac aneurysm—as we prefer to spell the word; thrombosis and tumours of the heart; cardiac syphilis; and congenital lesions of the heart.

Among the many splendid illustrations in the work, it is not easy to single out any for special notice and comment. But figures 43 and 44 show, in a vertical section of the thorax, what appears to be a most extraordinary concentric hypertrophy of the left ventricle in a case of which nothing is known as to the clinical history. There is no doubt that Dr. Norris

is correct in assuming that an explanation must be sought in the fact that the heart ceased to beat in systole. The sections in this case were prepared by Dr. George Fetterolf, of the University of Pennsylvania.

The work is a welcome addition to the bibliography of Diseases of the Heart, and sheds added lustre on the famous medical school of Philadelphia.

Saint Thomas's Hospital Reports. New Series. Edited by Dr. H. G. Turney and Mr. W. H. Battle. Vol. XXXVIII. London: J. & A. Churchill. 1911. 8vo. Pp. xii + 185.

Subscribers to these Reports need not be told of the wealth of information they contain in every province of Medicine; with, however, one very notable exception, anæsthetics. We get, and very properly, reports on the X-ray department, the Physical Exercise department, the Clinical and Pathological departments, and soforth; but of anæsthetics, general or local, nothing is told, although 4,176 surgical cases were treated in the wards. We think it is due to the medical profession that the annual report should give the experience of the anæsthetists of the hospital, and we earnestly hope that our appeal shall not be in vain. This omission is the only fault we find with this most valuable Annual, which is well worthy of careful study by practitioners, who will find in its pages just such information as he daily seeks.

Hospital Management. A Handbook for Hospital Trustees, Superintendents, Training-School Principals, Physicians, and all who are actively engaged in promoting Hospital Work. Edited by Charlotte A. Aikens. Illustrated. Philadelphia and London: W. B. Saunders Co. 1911. 8vo. Pp. 488.

This book, dedicated to the Members of the American Hospital Association, is the work of some twenty-two writers, each of whom is particularly fitted by special knowledge to deal with a part of the subject in hand. In this country we have no such thing as a hospital association; the executive of each hospital

works out the salvation of its own particular institution on its own lines and without much consultation with others. The study of such a work as that before us shows how much is to be learned from such consultation, and we cannot but think that did the members of the boards of our hospitals, especially those who are not medical men, study the subject of hospital management more fully their duties would be more effectively performed. Practically the whole field of hospital management is here treated of, and though some of the conclusions arrived at may not be suitable to the conditions of this country, yet we have no doubt a study of them would be productive of much good. It seems very probable that in the near future the conditions under which many of our voluntary hospitals exist will undergo considerable change, and in order that this change should be for the better, it is essential that the members of the various boards should be conversant with the best work that is being done in hospital management. For these reasons we heartily commend a study of Miss Aikens' book to all those whose duties involve the responsibility of hospital management.

The Canadian Medical Association Journal Issued Monthly. Toronto: Morang & Co., Ltd. 1911.

On January 1st of this year the *Montreal Medical Journal* ceased to be, and the *Canadian Medical Association Journal* took its place. We extend a warm welcome to this our new contemporary, which is issued as a medium for the expression of all that is best in Canadian Medicine. If one may judge by the first seven numbers now before us this Journal is destined to take a high place in periodical medical literature. Canadian Medicine has already assured its position, and the Journal that gives voice to the medical men of Canada is bound to exercise an influence for good in the world's progress Printed on excellent paper, in a clear and easily read type, and published in a convenient size, the Journal has everything from a typographical point of view to recommend it. The success of a professsional journal does not, however, depend entirely on its typographical excellence, for the quality of

the material it presents to its subscribers is an essential feature. We are glad to be able to say of this Journal that in this respect it has set itself a high standard, and one that it has more than succeeded in maintaining in the first six months of its existence. Long may it continue to do so, for though the field of professional journalism is at the present day vastly crowded, yet the space reserved for journals of the best kind is far from filled

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Clinical Symptomatology. By Alois Pick, Professor of Medicine, University of Vienna, and Adolph Hecht. New York and London : D. Appleton & Co. 1911. Royal 8vo. Pp. 833

This work is an English translation under the editorial supervision of Dr. K. K. Koessler, of the Rush Medical College.

The authors take the view that as we know very few efficient specific remedies for definite morbid conditions, we must in practice be content with directing our treatment against the more urgent symptoms that confront us.

With this end they have given us a volume in which they certainly do what they claim. Under the headings of the various symptoms we find the differential diagnosis clearly presented, and the therapeutics of the various conditions are discussed with considerable fullness

Special attention is paid to dangerous symptoms which the authors define as " not only everything that threatens life immediately, but every symptom which indicates persistent damage and a difficultly reparable condition." In fact the discussion of such conditions occupies the greater part of the work—over a hundred pages, for example, are filled by the chapter on " Disturbances of the Heart Action." On the other hand, gynæcological affections are left rather severely alone.

On the whole, though, the space given to each division is well proportioned and the entire work is adequate for its purpose.

This book will be decidedly useful as a work of reference, especially in cases where the ultimate cause of the mischief

is obscure. If the practitioner will refer to the more obvious symptoms he will find almost every condition in which they occur mentioned, and in the rarer forms of disease this will give considerable help towards an accurate diagnosis.

The book is got up in that well-finished style to which the American houses have made us accustomed. It suffers only in so far as it is obviously a translation. The translator uses several words which sound rather curious, though they may be American, and—what is "noodle-soup"?

RECENT WORKS ON THE BRAIN AND SPINAL CORD.

1. *Anatomy of the Brain and Spinal Cord.* By J. Ryland Whitaker, B.A., M.B. (Lond.), Fellow of the Royal College of Physicians, Edinburgh; Lecturer on Anatomy, Surgeons' Hall, Edinburgh, and School of Medicine for Women, Edinburgh; Examiner in Anatomy, Royal College of Physicians, Edinburgh. Fourth Edition. Edinburgh: E. & S. Livingstone. 1911. Cr. 8vo. Pp. xvi + 228.

2. *Compendium of Regional Diagnosis in Affections of the Brain and Spinal Cord.* A Concise Introduction to the Principles of Clinical Localisation in Diseases and Injuries of the Central Nervous System. By Robert Bing, Privat-Docent for Neurology in the University of Basle. Translated by F. S. Arnold, B.A., M.B., B.Ch. (Oxon.). With seventy Illustrations. London: Rebman, Ltd. [No date.] Demy 8vo. Pp. xi + 215.

These works on cognate subjects are complementary the one to the other. In the first Dr. Ryland Whitaker supplies a veritable pictorial guide to the anatomy of the brain and spinal cord. In the second, Dr. F. S. Arnold presents us with a good English translation of a "Compendium," written by Dr. Robert Bing, of Basle, in 1909, the "chief task of which is to give a presentation of a subject generally reputed difficult and complicated, which shall be as clear and simple as the author can make it, while not failing to be accurate and comprehensive, and which shall furnish, even to those who

have special knowledge of neurology, an easily and quickly consulted work of reference."

1. First in order of time and subject-matter comes Dr. Whitaker's work. This is the fourth edition, and the book had been out of print for several years. "Its one aim has always been to present, in as simple and clear a manner as possible, an outline of the Central Nervous System, to the student who, for the first time, is brought face to face with this most intricate subject."

The author has got over the difficulties connected with the introduction of the new Basle anatomical nomenclature (B. N. A.) by printing the newer names and the more important older ones in heavy type or in small capitals. Other names are printed in italics.

The work is in three sections. The first of these treats of the spinal cord, its membranes and vessels. The second section is devoted to the brain, its membranes and vessels; and in the third section an outline is given of the development of the brain and spinal cord from the ectoderm, or outer layer of cells of the blastoderm or germinal membrane. This difficult subject is made as plain as words can avail, but the letterpress would be made easier of comprehension if, in addition to Plate XXXVI. facing page 204, there was an illustration showing the primitive neural groove and the resulting primitive neural tube from which the brain and spinal cord are formed. Such an illustration may be found in Gray's Anatomy or Cunningham's Textbook of Anatomy.

Apart from this mild suggestive criticism, we have nothing but praise for Dr. Whitaker's work, which is profusely and beautifully illustrated by means of thirty-six plates, drawn by Mr. Cathie, the artist, and lithographed (many of them in colours) by Messrs. M'Lagan and Cumming, of Edinburgh.

2. Privat-Docent Bing's "Compendium" took its origin in connection with a course of lectures on regional diagnosis delivered to medical men in the University of Basle during the winter session of 1907–1908. The author is desirous to point out that it is not a "text-book" on the subject, but "a short,

practical vade-mecum of a didactic character," which " would be by no means unwelcome to the physician or surgeon called upon to localise a pathological process affecting the central nervous system."

" Regional diagnosis," as the author puts it well, " borrows its tools alike from anatomy and from physiology." It is, in fact, based on the applied anatomy and physiology of the central nervous system. Its practical importance is immense, viewed from the standpoint of medical treatment, of surgical interference, and of prognosis alike.

The best idea of the scope of the work will be gathered from a statement as to its contents. These are arranged in two Divisions—the first dealing with the regional diagnosis of lesions of the spinal cord, the second with the regional diagnosis of brain lesions.

Division I. is subdivided into A. " Transverse, or Systemic Diagnosis (*Querschnittsdiagnostik*), and B. " Longitudinal," or Segmental Diagnosis (*Höhendiagnostik*). There are three chapters in each subdivision.

In Division II. the regional diagnosis of brain lesions is considered under three headings :—A. Lesions in the region of the Cerebral Axis, or Brain-Stem—that is, the medulla oblongata, pons Varolii, cerebral peduncles, and corpora quadrigemina ; B. Lesions of the Cerebellum ; and C. Lesions of the Cerebrum, the basal ganglia, and " hypophysis " (as the translator prefers to call the pituitary body).

There are many interesting and some novel features in this book. For example, the table on page 65 illustrating segment diagnosis in reflex disturbances, and again the diagrammatic representation, on page 115, in transverse sections of the brain-stem, of five concrete cases of focal lesions, with their clinical symptoms appended. Unfortunately the ingenious table containing these symptoms follows the illustrations on the next page (116), so that the reader has to keep turning the page backwards and forwards when comparing the seat of the lesion with its clinical phenomena. This inconvenience could easily have been avoided by printing the illustrations and the table *vis-à-vis* instead of *dos-à-dos*. However, we must not be hypercritical, but frankly acknowledge that Dr. F. S. Arnold

has rendered a very real service to medical students and also to medical practitioners by his excellent English rendering of Privat-Docent Bing's text.

Medical Revolution: A Plea for National Preservation of Health based upon the Natural Interpretation of Disease. By Sydney W. MacIlwaine, M.R.C.S., L.R.C.P. (Retired). London: P. S. King & Son. 1911. 8vo. Pp. xii + 162.

The first decade of the Twentieth Century has been marked by changes, social and scientific, in many departments of human activity, and it is not to be wondered at that Medicine, which is so closely associated with all human activity, should have felt these changes. Both in its science and art Medicine has made, and is making, extraordinarily rapid advances, and there is considerable evidence that in the near future the professional relation of the faculty to the community at large will undergo great modifications. We do not feel competent to dogmatise on the exact nature of these coming changes, but it would seem probable that one great feature of them will be the very different position Preventive Medicine will occupy. That prevention is better than cure has been a truism during all historical time, but that it is practicable to realise this better part in Medicine appears to be only slowly dawning on the minds of the people and their rulers. Legislation in sanitary matters must largely wait on the will of the people, and one cannot expect an expression of this will till education of the people has reached a comparatively high degree. Instruction has now been almost universal for a considerable time, there are signs of the development of education, and, consequently, one may hope that in the not distant future the general public will take a rational view of the needs of Public Health. Let us trust that the medical profession will have its house in such order that it can wisely lead the public to the desired goal and not be driven to accommodate itself to the changed circumstances.

Dr. MacIlwaine, having retired after some twenty years' experience of the profession, would appear to have grave doubts as to the capacity of the profession as at present con-

stituted to undertake this task. He finds serious flaws in the system of medical education, he deplores the almost total lack of organisation in the profession, he looks on the growth of specialism as detrimental to both the doctors and their patients, and as a result he considers that medical practice has degenerated into little more than rank empiricism. These are hard words, and if they can be justified, urgently call for medical reform.

A large part of the book before us is taken up with an attack on the profession for the recognition of a number of symptom-groups as diseases, such, for example, as bronchitis, Bright's disease, diabetes; and for the acceptance of such recognition as a satisfactory diagnosis. Our author states that physicians are satisfied with such a diagnosis as Bright's disease, and with the recognition that the cause of this disease is cirrhosis of the kidneys, while in truth this cirrhosis is merely a symptom of many causes. This acquiescence in an inadequate analysis of causation is unscientific and hinders the progress of Preventive Medicine. That our analysis and knowledge of the causes of most diseases is incomplete, and, consequently, our classification unsatisfactory will be admitted by all, but we do not for one moment admit that this acceptance of imperfect knowledge means that we are satisfied with it, or hinders our efforts to make it more perfect. If we take, for instance, the symptom-group *infantile paralysis*, to which our author refers again and again, this was recognised before the underlying anatomical change in the spinal cord was recognised. The recognition of this anatomical change was a considerable advance, and with this advance the profession had to be satisfied for many years. It was then found that the change in the nerve centres resulted from a vascular lesion, and now evidence is accumulating that this vascular lesion results from microbic infection. Further investigation will no doubt show the exact nature of the microbe and its mode of infection, then prevention may be possible. A similar account might be given of the growth of our knowledge of the other so-called spurious diseases; they are accepted as entities merely for convenience of working, but this acceptance does not in any sense mean that we are satisfied with the completeness of our

knowledge. The cellular pathology founded by the great Virchow, which our author so roundly condemns, has lead to enormous advances in medicine and surgery, it is an essential step in the elucidation of the problems of disease, but it is mere nonsense to say that it is looked on as the final goal.

With the constructive policy of our author we are much in sympathy. His scheme for remodelling the out-patient departments of our great hospitals has much that attracts us, but in this advocacy of reform he seems to forget that doctors are dependent on the requirements of the people, or rather on the individuals which constitute the people, and what these individuals are looking for is relief from their present ills and not a general amelioration of the ills of the community. The time will no doubt come when the good of the individual and the good of the community will more nearly coincide, when the practicability of the truism about prevention is realised, and then, we have no doubt, the profession will be ready to take its part in the more efficient ministration to public needs.

Though we disagree with much put forward in this book, we would recommend a study of it to members of our profession, for we believe that it will stimulate thought, and in doing so will do good.

The New Sydenham Society. Retrospective Memoranda. By Sir Jonathan Hutchinson, F.R.S. Subject Index and Index of Names, compiled by Charles R. Hewitt, Librarian to the Royal Society of Medicine. London: Published for the Society by H. K. Lewis. 1911. 8vo. Pp. 70, and 11 Portraits.

The New Sydenham Society is dead. The Library of Works, published by it during its forty-eight years of active life, is its monument, and it is but fitting that Sir Jonathan Hutchinson, who acted as the midwife at its birth, should now write its obituary notice.

The New Sydenham Society had its origin from the Old Sydenham Society, which began work in 1843, and to the labours of which English Medicine owes some of the most

valued translations of the ancient classics of Medicine. One cannot help being struck with the similarity of the deaths of the two Societies. The Old Society had done excellent work, but as it grew older it failed to maintain its high traditions. Its members chiefly consisted of middle-aged or elderly men who seemed to loose touch with the requirements of the time, and as they died out the membership rapidly declined, and in spite of the vigorous protest of one at least of the younger members the Society was wound up. The New Society flourished even more than the old, its scope was wider and its membership considerable. For many years its publications were eagerly sought for and difficult to procure, but like its predecessor, as it lost the elasticity of youth, old age seemed to grip its vitals, it ceased to accommodate itself to the requirements of the time, and in 1907, at the wish of over seventy per cent. of its active members the Society ceased to exist.

In the review of the past Sir Jonathan Hutchinson makes several suggestions to account for the decline in the popularity of the Society, and no doubt many of these factors that he mentions contributed to the result ; but to us, as old subscribers to the Society, it seems that the death was directly due to the publication of the Atlas of Clinical Medicine, Surgery, and Pathology. This Atlas appealed to few ; the pictures were in many cases distinctly bad, and often were of subjects that had no direct interest for the majority of the members. One need only mention the radiograms of fractures, which formed practically one whole fasciculus, to support both these contentions : as radiograms they were poor, and as plates for instruction they were useless. We know, as a matter of fact, that this Atlas lost the Society many subscribers, and we believe that the persistence in its publication killed the Society. In his concluding paragraphs Sir Jonathan Hutchinson gives some wise advice to those who would wish to start a society on similar lines. We should wish to add to that advice the recommendation that the executive should change regularly so as to enable the work of the society to keep in touch with the needs of those on the continuance of whose goodwill the life of such a society must depend.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—Sir Charles Ball, M.D., F.R.C.S.I.
General Secretary—J. A. Scott, M.D., F.R.C.S.I.

SECTION OF OBSTETRICS.

President—H. Jellett, M.D., F.R.C.P.I.
Sectional Secretary—Gibbon FitzGibbon, M.D., F.R.C.P.I.

Friday, November 25, 1910.

The President in the Chair.

Exhibits.

(*a*) *Four Pounds Placenta.* (*b*) *Two Cases of Hydrocephalus.*

Dr. Freeland exhibited a four pound placenta from a woman who had had four normal full-term living children. After delivery, on May 25, 1910, he was sent for on account of the size of the uterus. He expressed the placenta, and when delivered it measured 10 inches across, and the placenta, membranes, and the blood contained in the placenta weighed four pounds. It was large and pale, very soft, and friable. The child weighed six and a quarter pounds, was normal in every way, and while in the hospital was perfectly healthy as far as they could see. It showed the usual initial loss of half a pound, and then a slight increase, and went out on the eighth day weighing six pounds. The child died after the fifth week, and the mother said it had wasted shortly after leaving hospital, and died with a wheezing on its chest. She had promised to bring it back, but had not done so. As far as the mother

was concerned there was no demonstrable heart or kidney disease, and nothing to indicate specific disease; but under the microscope the placenta showed what was regarded as the characteristic appearance of a syphilitic placenta. He showed comparative sections of the arborescent normal placenta and of the thickening and loss of vascularity in the other. The normal relation between the placenta and child weight was 1 to 5½ or 6. It was said that if the placenta weighed more than one-fifth the weight of the child it was almost certainly due to syphilis. The largest record he could find of a syphilitic placenta was 1,950 grammes reported by Audebert (*Jnl. de Méd. de Bordeaux*, 1908); he could not say if the child was alive. The largest placentas reported were those connected with ascites and dropsy of the child in connection with renal disease of the mother. In some cases reported by Cohn (*Zeitschrift für Geb. und Gyn.*, 1888), the largest placenta weighed 2,900 grammes, and the child 3,100, but the children in these cases were either born dead or died almost immediately.

The two specimens of hydrocephalus illustrated two methods of delivery. In the case of the larger child, he went to see the woman in the Extern Service a year and a half ago. . He found the os fully dilated and the head showing at the vulva. The face was palpable on a level with the umbilicus. The patient had been in the second stage some hours, and was showing signs of distress from delay. He punctured the scalp as it appeared at the vulva, and a large amount of fluid escaped. After the head was reduced in size, pressure was put on the fundus, and it came out without difficulty. In addition to having hydrocephalus, the child had five toes and a big toe on each foot, and five fingers and a thumb on each hand. The smaller child was from a woman who had had four normal children before. In this case the membranes were ruptured, and the head was free above the brim, with the brow presenting; the fœtal heart was 144. He performed version with rather more difficulty than he expected, the cord being wound around both legs and the body. The child was dead when the turning was finished, and when the breech had been delivered it was necessary to divide the cord to allow the shoulders to advance. The head was too large to pass the brim, there was a lumbar spina bifida, and the top was cut

off this to allow the fluid to escape, but none came; an ordinary gum elastic catheter was passed up the spinal canal, but could not be made to enter the skull. A catheter and stylet was then passed, and considerable force was necessary to make this enter the skull, the obstruction being just about the level of the foramen magnum. Twelve ounces of fluid came away, and the child was easily delivered. It had talipes of both feet and a short left leg.

Professor Alfred Smith said the history of the case of large placenta was not a typical syphilitic history. The typical history was first a dead child in the fifth month, then a dead child in the seventh month, then a dead child at full term. Possibly afterwards a child would be born alive, then develop a rash and die. Whereas in the case before us all four children were born alive at full term, none of them developed any syphilitic rash. He pointed out the possibility of an error in diagnosis.

Dr. Tweedy said that there was very little literature concerning syphilis in the placenta among British writers. In fact the case before them was the first of the kind that had been brought before the Academy. He regretted to say that the Rotunda Pathological Laboratory had added nothing to the general information on the subject, and he thought it was probably the first time in Dublin that anybody had gone to the trouble to tease out chorionic villi and look for themselves for what had been reported by foreign writers as occurring in a syphilitic placenta. It would be most important if they could definitely take up a placenta and say that the woman had syphilis or that the child was syphilitic. Some English writers stated that clubbing of the villi and the obliterating inflammation of the vessels was not pathognomonic of syphilis, but the specimens showed a typical condition resembling a known syphilitic placenta. He had previously been under the impression that a syphilitic placenta was small, greasy and shrivelled, and it had been a revelation to him to find that a big placenta was ever associated with syphilis. With regard to the specimen of hydrocephalus with the catheter stuck in the spinal cord, he had seen pictures with fluid spouting out the moment a hole was put in the spine, and that was the idea he had in his mind of what would have occurred. It was worth remembering that when they had difficulty with the after-coming

head, it was always wise to palpate and see the condition of affairs, though it was not always easy to do so.

The President said he thought it was Dr. Ballantyne, of Edinburgh, who advised the method of relieving hydrocephalus by puncture of the spinal canal. If he (Dr. Ballantyne) was also responsible for the picture of the spouting catheter, referred to by Dr. Tweedy, it probably had reference to external hydrocephalus; and he wondered if in the case before them it was not internal. With regard to the syphilitic placenta, he thought it was too optimistic to say that they could diagnosticate the conditions by the percentage of weight. There must be other factors, and though in a large number of cases their attention might be drawn to the condition by the proportion, he did not think they could take it as an absolute guide. The section under the microscope was very similar to that shown by Professor Whitridge Williams in his work on Obstetrics.

Dr. Freeland, in reply, said the case from which he had prepared the teased specimen had come into his hands only two days previously. The child was born alive, but lived only a few minutes. It weighed only three and a half pounds, while the placenta weighed two pounds. The liver weighed one-sixth, instead of one-thirteenth, of the body-weight. The child had ascites and typical epiphyses at the knee. It lived only a few minutes. The mother's first child was born two years ago, and was living and perfectly healthy. She herself had never had any symptoms of syphilis, but he had not seen the husband. He did not know whether the hydrocephalus was internal or external, but they would open the head later and see.

[Subsequent examination showed internal hydrocephalus. The catheter passed into the posterior extremity of the left lateral ventricle, through about one-quarter inch of brain substance.]

Some Failures and Successes from my Case Books.

Dr. J. Spencer Shiell read a paper on this subject. [This Paper will be found at page 401 of Vol. cxxxi. Third Series, No. 474. June, 1911.]

Professor Alfred Smith said the statement, that the treatment of abortion should be more expectant than operative, put the case in a nutshell. But they had to put before

the every-day practitioner some rule to guide him as to which treatment to adopt. His own rule was to prescribe rest if there was slight hæmorrhage. If there was intermittent pain and hæmorrhage, with dilatation, then operate. He might mention a drug that was a great help in relieving contractions of the uterus—two tabloids of $\frac{1}{200}$ grain atropine dissolved in a small quantity of sterilised water and soaked in a small tampon of sterilised gauze and placed in the posterior cul-de-sac. He believed there was a distinct place for the induction of labour in midwifery. Some one had found that the diminution of carbohydrates and fluids in the dietary diminished the size of the child materially. There was no more difficult problem than to determine the date of birth. Even in the lower animals the variations were very great; each individual seemed to be a law unto itself.

Dr. Freeland said, in reference to the use of scopolamine-morphine, they saw in the Rotunda in the course of a year cases of prolonged labour that got no anæsthetic, and yet delivered themselves normally, and had serious *post-partum* hæmorrhage. If they had got scopolamine it is possible they would have blamed this for the hæmorrhage. As to the other bad results, they did not see any in their series of 100 cases, and he wondered if it was the preparation of the drug that had to do with it. He thought the bad results reported from the Continent were due to the large doses given. If moderate doses were given, $\frac{1}{120}$ of a grain, and repeated once or at the most twice, he did not think they would see so many cases of mania.

Dr. Tweedy said it was generally thought in Dublin that contracted pelvis was rare, yet Dr. Sheill counted his cases in numbers. As to the induction of premature labour, it was unjustifiable in well-trained men. He did not say that conditions might not arise in which induction might be necessary, but he thought Dr. Sheill gave his case away when he stated that one could not be sure of the date of birth within a range of one to three weeks, and yet said he induced labour the thirty-fourth week, when confessedly he did not know within three weeks as to when the woman was up to full term. When he (Dr. Tweedy) heard of great successes after induction of premature labour, he wondered how the pelvis had been measured. The man who did not measure would have better success than a man who

measured with a Skutsch's pelvimeter. He had given induction a fair trial for a year and a half, and the fœtal mortality worked out over 50 per cent. when cases were accurately measured. In the Queen Charlotte Hospital it worked out at 11 per cent., but they measured the pelvis by passing two fingers into the vagina and calculating the size of the inlet. No accuracy could be obtained by a diagonal conjugate measurement. When Dr. Sheill said he knew the proportion between the head and the pelvis he wondered did he give the patient an anæsthetic once a week. If he did not, he could tell him that it was absolutely inaccurate to base any prognosis on the supposed proportion of the head to the pelvis. The treatment for threatened abortion, or abortion, was to leave the case to nature. Treat every case as threatened, and if it was inevitable, the woman would deliver herself naturally in nineteen cases out of twenty. It was only the rare case of abortion that required treatment at all. Ninety out of a hundred married women would be found to have had abortions without a doctor or nurse present. His rule was only to act if dangerous symptoms arose; if she was bleeding so hard that she would die, then by all means empty the uterus: whether it was threatened or inevitable abortion they had to save her life. Dr. Sheill objected, in cases of contracted pelvis, to the modern operations of pubiotomy or hysterotomy. He (Dr. Tweedy) thought the day had arrived when the general practitioner should perform pubiotomy. He had performed it nine times, and, save in the first case, when he did not understand the operation, all his patients had recovered uninterruptedly. The one complication he had had was hæmorrhage in two cases, but it was absolutely easy to control. Hæmorrhage was due to faulty technique. He was absolutely convinced that if there was hæmorrhage, the operator had made a mistake, as happened in his two cases. Dr. Sheill had alluded to the importance of estimating the total amount of urea in the urine, but it was worthless to test the urea in the urine, and to leave it unestimated in the fæces. He thought prophylactic version the worst of all treatments for contracted pelvis: it had proved disastrous in his hands as far as the life of the child went.

Dr. Trevor Smith said he remembered seeing several cases of induction of premature labour all of which were

successful, and upon one of the patients pubiotomy was afterwards done with the result that the mother was crippled for life, at least so he was informed.

The President said Sir William Smyly taught the elimination of the word "inevitable" from the classification of abortion, and he thought that teaching was universally accepted. The question that did arise was whether the patient had lost as much blood as she could afford to lose, or if the ovum was in an unsafe condition. Dr. Tweedy had a very considerable experience of pubiotomy on which to found his opinion, but other authorities held a different opinion. Induction was not a perfectly safe treatment. The operation offered a very easy route to the infection of the uterus. Could pubiotomy be regarded as relatively safer? As to its ease there could be no doubt. Post-puerperal examination of lying-in women was, he was inclined to think, practised by a considerable number, though the desire to practise it was limited by the wishes of the patient, and in cases of large maternities by the time involved.

Dr. Spencer Sheill, in reply to Dr. Tweedy, said that it was true that contracted pelves were not very common in Dublin, but a number of his cases had been sent to him from various parts of Ireland. He said that although no operation could be said to be absolutely safe, he had never had or seen a case of induction go wrong. But he had never used the bougie method in private practice. He could start labour in practically all cases by tightly plugging the cervix with iodoform gauze, of course with all antiseptic precautions. Regarding the foretelling of the date of birth, Dr. Tweedy must have forgotten that he (Dr. Sheill) had said "that we could not be sure of the date within from one to three weeks, *except when a bi-manual examination was made between the sixth and ninth weeks of gestation*, when we could tell within two or three days." He always insisted upon this examination in these important cases. By accurate measurement he did not mean counting on his finger, but measuring as accurately as it was possible, using a good quality pelvimeter. He had used the Skutsch in five cases, two under an anæsthetic. They were all definitely contracted, but some in minor degree. Dr. Sheill did not object entirely to the operations of Cæsarean section and

pubiotomy by any means; but he did not lean to the other extreme of condemning induction of labour. Both methods had their good points, the latter being invaluable in the hands of the able practitioner. He could not agree with Dr. Tweedy that pubiotomy was to be considered a safe operation in the hands of general practitioners. In reply to Professor Smith, dietary reduced the size of the child, but not the hardness of the head. With reference to Dr. Tweedy's opinion of the treatment of abortion cases, Dr. Sheill said that he could not permit all his cases to terminate by natural means—only those at the top of the tree of fame could assume an air of "masterful inactivity." He preferred to assist Nature in all bad cases rather than weaken his patients by continued hæmorrhage. He did not like unnecessary vaginal manipulation in the threatened abortion. His practice was to use belladonna or belladonna and morphine in the form of suppositories per rectum. He could not agree with leaving abortion cases to Nature when they had gone to the extent of bad hæmorrhage. There were instances where the finger, or curette, or expression, was absolutely necessary. Regarding scopolamine in labour cases, he said there appeared to be a general tendency to an increase of hæmorrhage where scopolamine had been used. Speaking of the estimation of urea excreted in pregnancy, Dr. Sheill insisted that it was not a useless procedure testing the urine alone, whilst omitting to test the fæces. It was a well-known clinical fact that, disregarding the fæces, when the total urea in twenty-four hours fell much below normal—even without marked symptoms in the patient—trouble was threatening; and treatment with a view to raising the quantity of urea excreted, or to reduce the intake, almost invariably staved off complications or perhaps even prevented eclampsia. Dr. Sheill returned thanks to the Section for the reception they had accorded his paper.

Friday, February 17, 1911.

THE PRESIDENT in the Chair.

Adeno-carcinoma of the Cervix (*Wertheim*).

THE PRESIDENT showed a specimen which was taken from a middle-aged woman. The cervical ring was practically com-

plete all round. On passing a curette into the cervical cavity fragments were taken away, but it was not until the cervix had been divided high up that a specimen could be got for microscopical examination. It was a case of adeno-carcinoma of the cervix which simulated a case of cervical myoma occurring in the same situation. There was nothing in the abdomen to be felt, and the diagnosis had to be made by splitting the cervix high up. The operation was a very extensive one. On opening the abdomen the ovaries were found to be affected. The growth extended very far out to the sides of the pelvis. The ureters were dissected out of a mass of cancerous tissue. It was a case in which recurrence would be expected very soon. The patient left hospital a short time after the operation. About two months afterwards she returned to the extern department complaining of pain in the region of the vulva, where a ring of infiltration was found. She was taken into the house and examined under an anæsthetic, and no sub-peritoneal extension could be felt. He removed a piece of tissue near the vulva, which tissue was found to be cancerous, the same as there was in the uterus. It was very satisfactory that there was no recurrence in the broad ligament. He took away about three-quarters of the remaining part of the vagina, and he thought the patient would be able to go out in a short time.

Secondary Abdominal Pregnancy, Fourth Month.

Dr. Gibbon FitzGibbon showed a case. The patient was sent into Mercer's Hospital for abdominal tumour. The history was a typical one of ectopic gestation. She was aged thirty-five, had two children, aged nine and seven and a half years. At the second confinement the child was very large, the presentation was a transverse one, and there was great difficulty in the delivery. Subsequently the patient evidently suffered from pelvic peritonitis or cellulitis. She had not been quite well for about five years after that, but the two years previous to her admission to hospital she had been in fair health. As regards her present illness she menstruated some time during September. About the 20th of November she was seized with severe pain in her abdomen and fainted. A few days after that she had profuse and

continuous hæmorrhage which lasted for ten days, and intermittent hæmorrhage for a fortnight more. She came into hospital on the 26th of December, but nothing could then be done on account of the condition of her mouth. The tumour could be felt running from the left anterior superior spine to half way between the symphysis and the umbilicus. On making a vaginal examination he could make out the uterus in front, but owing to tenderness no bi-manual examination could be made. On the 14th of January he opened the abdomen. The whole pelvic region was matted together; the intestines were adherent to the left broad ligament, and also to the anterior abdominal wall. The adhesions were fairly easily broken down. He clamped across the tube between the tumour and the uterus, and cut down on the side of the uterus and shelled out the tumour. The placenta lay in front of the sac and ran up to the side of the uterus. Its blood supply came from five or six vessels in the angle between the base of the broad ligament and the uterus. On taking out the tumour there was nothing between the fœtus and the intestines except the fœtal membranes. The front of the sac was formed by the anterior layer of the broad ligament. There was some oozing low down behind the uterus, for which a gauze drain was inserted. Four days after the operation a typical lochial discharge commenced and went through the usual stages. The uterus at the time of operation was the size of a medium orange, and evidently contained a decidual formation, but no pieces were passed. The drain was taken out in forty-eight hours, and the patient made an uninterrupted recovery, and went out on the twenty-sixth day after the operation. On examining her before leaving the hospital the uterus was in front and mobile, and the thickening in the left side of the pelvis had cleared up almost completely.

Dr. Purefoy wanted to know why Dr. FitzGibbon had called it secondary abdominal gestation. He wanted to know whether he (Dr. FitzGibbon) had ever read of primary abdominal gestation. He would like to know with what structures the placenta was continuous, and on what structures the placenta had developed. There was a possibility of development of the decidua outside the cavity of the uterus.

The President said a case of primary abdominal preg-

nancy was recorded by Dr. Hurst. In this case the entire pregnancy structures were represented by a few layers of chorion.

Dr. FitzGibbon said the entire pregnancy was closed up in an apparently closed sac. All through the abdomen there were pieces of very old brown leathery-looking blood clot distributed over the small intestine and high up in the abdomen. This showed there had been bleeding into the abdominal cavity. The placenta was formed between the sides of the uterus running up over the top of the specimen. The rest of the placenta seems to run over the top and front of the sac.

Diseased Placenta.

Dr. Spencer Sheill showed a diseased placenta. The patient was in her fourth pregnancy. In the first pregnancy the child was within two months of term, but was born dead. The second pregnancy was premature. The third went to term, but the child died of convulsions an hour after birth. In her fourth pregnancy he attended the patient, who was in her eighth month. The child was born dead. The placenta was small and thin. Two-thirds of it were hard and fatty-looking and one-third was normal in appearance, and looked perfectly healthy to the naked eye. It showed recent *ante-partum* hæmorrhages. The pathological report made by Dr. Boxwell was as follows:—"The placenta is small, thin, and fibrous. On section it showed white areas of necrosis. Hæmorrhages are numerous, and there is a remarkable fibrosis of the blood vessels leading to more or less complete obliteration over considerable areas. The villi are atrophied." He thought the diagnosis was probably syphilis, but syphilitic placentas were said to be larger and paler. Under the microscope could be seen marked endarteritis and proliferation of the connective tissue. He considered the reason the placenta was small was that the syphilitic process had expended itself more on the blood vessels, whereas in large placentæ it may exercise inflammatory changes, and the connective tissue changes were more pronounced.

Dr. Tweedy said small placentæ in syphilis were not uncommon, and were usually found with a dead fœtus, while in the large placenta the fœtus is usually born alive, and Dr.

Sheill's case was an example of this where the placenta was small and the fœtus dead.

Dr. Purefoy said a syphilitic placenta associated with a dead infant was smaller than normal. He was of opinion that in a syphilitic placenta the structural changes in the blood vessels were such as would enable one to diagnosticate the changes as syphilitic. He thought macroscopically he would be puzzled to say whether it was not a placenta structurally deformed as a result of kidney disease. Of course, the history leaves no doubt that the cause was syphilis.

Dr. Crofton said as regards diagnosis it could be cleared up by doing a Wassermann. If this was positive the patient had syphilis, and could be treated accordingly.

Dr. Sheill said there was no evidence of kidney trouble either as regards tenderness, enlargement of the kidney, or presence of albumen. In reference to the statement that where the child is dead the placenta is small, he thought books did not agree with that statement. As to the changes in the blood vessels permitting of diagnosis he thought there was an element of doubt. It was said that the microscope alone made the diagnosis whether the syphilis was paternal or maternal. Where it was confined to the villi it was paternal, but where it was confined to the stroma it was maternal.

Forty-eight Cases of Extensive Abdominal Resection for Uterine Cancer.

Dr. Hastings Tweedy brought forward a series of forty-six cases of Wertheim's operation. His mortality was 19.5 per cent. This percentage was swelled by the inclusion of his early cases, in which the mortality worked out at 33 per cent. for his first year. He operated on 90 per cent. of the cases seen by him, and advocated operation in advanced cancer, not in the hope of bringing about a cure, but to mitigate pain and distress. The surgeon who could count a large percentage of cures after a two-years' interval must have obtained them by selection of cases, and must, therefore, have consigned numbers of operable cancer patients to a hopeless outlook and a horrible death.

Professor Alfred Smith said that Wertheim did well when he followed the general surgeon's method in operating on the

breast. He always felt that the removal of the glands was a great advance in the operation on the breast. The operability of cases must be considered. He said the anatomists had not given much information as regards the direction of the lymphatics. The surgery of the ureter was of extreme importance. In regard to the different methods of carrying out implantation of the ureter into the bladder he mentioned the one particular case where he had damaged the ureter. The case was not one of cancer of the uterus. He tried to implant the ureter into the bladder. The patient died, and he did not know whether it was due to improper implantation or not. The danger is, as Dr. Tweedy remarks, the retraction of the ureter, and the plexus which goes to nourish the ureter may be damaged in the manipulation. He mentioned Dr. Latzko's method. The operation was a very simple one. He makes a relatively big incision into the bladder, but he does not stitch the ureter to the bladder. He anchors the bladder to the stump of the suspensory ligament of the ovary. He draws the bladder well over to the side of the damaged ureter. He leaves the damaged ureter in the bladder, where he says it becomes adherent, and no trouble follows. He (the speaker) said there is often a difficulty in recognising the ureter, but on tapping the ureter one will often get the vermicular action quite plainly and distinct. He thought this one of the most important features in detecting it. In regard to the preliminary treatment of cancer of the cervix, he thought a bathing cap made of rubber was one of the finest methods he knew of. The cap is fitted on to the cervix and stitched there. This would prevent implantation of the cancer cells. In reference to the spread of peritonitis he did not think Dr. Tweedy's method could be improved upon for preventing it. Dr. Tweedy raised the point as to the justification of operating on cases which were considered inoperable. He (the speaker) mentioned a case which he had at present in hospital, and the patient told him she wanted no operation, but preferred to die.

Dr. Purefoy said the number of cases open to operative treatment has been enormously extended by Wertheim's method. He said, providing the patient was willing, operation should be attempted on any case where the patient is likely to survive the shock thereof. We may console ourselves with the reflection that though the indurated tissue is

no doubt often cancerous it is not invariably so. Glands enlarged and hard when removed have often been shown under the microscope to be free from cancerous tissue.

Sir William Smyly said that Wertheim's method is still the best, and it would be best for beginners at least to stick closely to the rules laid down by him in a work just published founded upon an experience of five hundred operations. It appeared that his methods differ now very little from those advocated at the Belfast meeting of the British Medical Association five years ago. The cause of ureteral fistula appears to be still an unsolved riddle. Wertheim had varied his methods with the different theories as to causation, but seems to have had about the same number of fistulæ in each hundred cases. With regard to the preparation of the patient before operation, he read recently that it was unnecessary, and only caused pain and hæmorrhage; but on thinking it over he thought it a great error to omit the preparation of the cervix, because should the vagina be opened the patient would undoubtedly get peritonitis. Wertheim lays great weight on draining the subperitoneal spaces, and unfortunate results were due to this drain closing up. He no longer tries to expose the ureters at the beginning of the operation, but looks for them after dividing the infundibulo-pelvic ligaments. He does not try to separate the bladder down to the vagina at the beginning of the operation, but he separates the bladder from the uterus, and after the ureters have been fully exposed, the bladder from the vagina. By doing so there was less risk of injuring the ureter, and it was possible to go further out to the sides, and in cases where the bladder is fixed to the uterus or vagina a finger can be passed from the side underneath the cancerous part, and so an idea obtained of how much cancerous tissue has to be cut through.

Dr. Thompson asked whether it would not be advisable to remove the kidney on the side of an injured ureter, as many people got on quite well with only one kidney.

The President said, with regard to the technique of the operation there were two modifications—one, originally taught by Wertheim, in which the first step was to separate the bladder from the uterus; the other by Bumm, in which the infundibulo-pelvic ligament was divided, and the peritoneum at the base of the broad ligament cut through, after which

the ureter was easily seen. It seemed to him (the speaker) simple to find the ureter by this method, and it could then be traced into the cancerous mass. The only case where he thought this procedure was not preferable was where there was extensive involvement of the bladder wall, and this could be found out by cystoscopic examination. If the bladder wall was found to be clear he could not see that the two procedures were comparable—the one exposed with one cut of the scissors a long part of the ureter, while the other necessitated tunnelling under the broad ligament. In regard to five cases which he had recently seen, the first one was hopeless, and the patient died a fortnight after. As soon as he had divided the infundibulo-pelvic ligaments he found the whole of the pelvis from side to side perfectly solid. There were glands all over the place, and the ureter was dilated. If the operation had been done the ureter would certainly have been cut across. The second case was found to be hopeless by means of the cystoscope, the whole bladder wall being involved. The other cases he had shown at this meeting. In one he had taken a good piece of the rectum away. The last case was a favourable one. As regards drainage through the abdominal wall he could not see the object of it. He had not drained in that way for a long time except in cases of general peritonitis.

Dr. Tweedy, in reply, said he did not aim at curability, but at the relief of symptoms. The statistics which went to demonstrate the curative powers of the operation were most fallacious, and men who were too careful of statistics must have refused operation on cases where relief could be obtained. He was surprised at the great number of cases of ureteral fistulæ and cystitis met with in Wertheim cases, and this in spite of the most elaborate aseptic precautions and preparation of the patient. The preparation can be carried a great deal too far. Personally, he thought a fortnight a shocking interval to leave a woman without operation, and tended to make the chances of recovery graver and less hopeful. Therefore, he would say an interval of two or three days should be the utmost to leave a patient without operating, as every hour is only adding to the chances of metastasis. He said Wertheim made a mistake in not using gloves, as in this operation especially gloves are required. If cancerous tissue gets on the hands the bladder, ureter,

and cellular tissue around the ureter may be infected, and he could quite understand cystitis and ureteral fistulæ occurring. Drainage of the cellular tissue is greatly advocated by Wertheim. On the other hand, many great authorities—for instance, Dr. Lockyer, of London—hardly use drainage at all. He does not operate on 90 per cent. of patients, but selects his cases. In other words, he looks for early cases of cancer. If it is an early case it is not necessary to drain; if a late case it must be drained. But early or late, gloves are used. It is necessary for Wertheim to drain, but not for Lockyer. Removal of the kidney has been done very many times. Of course it adds greatly to the shock of a patient who is already in a wretched condition. His objection to the President's method was that he was afraid of going too deep down. The ureter retracts towards the cervix and gets buried in a mass of cancer tissue. He said he was very fond of draining through the abdominal wound, and in this operation there was no better channel—the plugging in the subperitoneal spaces passes through the vagina, but was completely closed off from the pouch of Douglas, and this he drained with the gauze through the lower angle of the wound. He thought the great feature of Wertheim's operation was the complete shutting off of the peritoneum with drainage, and abdominal drainage was also at times a great advantage.

SECTION OF SURGERY.

President—R. H. Woods, P.R.C.S.I.
Sectional Secretary—A J. Blayney, F.R.C.S.I.

Friday, March 3, 1911.

The President in the Chair.

Remarks on Appendicular Dyspepsia and on the Treatment of Diffuse Peritonitis.

Mr. R. Charles B. Maunsell read a paper on "Appendicular Dyspepsia." He pointed out that the name was applied to a group of symptoms which occurred in many cases of chronic inflammation of the appendix, and which, although

recognised by many surgeons, had not had public attention drawn to it until Mr. Moynihan published his paper on the subject last year. Mr. Maunsell read the histories of a few examples, and stated that, in his opinion, there were two forms of the grouping of symptoms. In the first form the symptoms were mainly gastric, in the second mainly intestinal. A warning note was sounded with regard to other possible abdominal causes of reflex gastric disturbance, and special attention was drawn to the fact that the demonstration of chronic appendicular disease did not eliminate the possible presence of organic gastric disease. The concluding portion of Mr. Maunsell's paper consisted of a strong condemnation of flushing with saline solution in cases of peritonitis following perforation of the appendix, and advocating removal of the appendix and the insertion of "cigarette" drains into the pelvis and kidney pouches, which method of treatment Mr. Maunsell and others had found uniformly successful even in most advanced and apparently hopeless cases of peritonitis.

Appendicectomy, with Special Reference to the Treatment of Adhesions.

Mr. W. S. Haughton read a paper on the above subject. He recommended that in all cases of operation on the appendix during the "cold" stage a search should be made for adhesions, the result of previous attacks of acute inflammation. If this be done there will be found in many cases kinks in the intestine due to bands which should be divided. He had found in all cases in which he examined for it a thin membrane spread over the cæcum and ascending colon, rendered visible only by the fine network of blood vessels which ramify in it. The division of this always caused a marked change in the cæcum, causing it to bulge forward, showing that it had previously been bound down by this membrane. He advocated crushing the base of the appendix before removing it. The crushed part should be then cut through and invaginated beneath a purse-string suture.

Mr. Maunsell said he would be inclined to crush the stump close to the clamp, ligature with silk and top sew. If any sepsis would follow, the ligature would discharge into

the cæcum, so there is no danger of external trouble. It was found that the method advocated by Mr. Haughton sometimes led to hæmorrhage from the bowels.

Mr. Stokes, referring to appendicular dyspepsia, mentioned a case of a gentleman who came to him with symptoms suggesting duodenal ulcer. Subsequently pain was referable to the appendix, which was removed. It was in a very diseased condition, while the duodenum seemed normal, but he still had his dyspepsia. He thought adhesions in the chronic stage should be divided. With regard to the acute cases he mentioned the case of a student who had an acute attack of appendicitis with abscess. It was opened and drained. He eventually got a second and a third attack. On the last occasion the appendix was removed. The reason the appendix was not removed before the third attack was the fear of breaking down adhesions, but not the slightest trace of adhesions was found on opening the abdomen subsequently.

Mr. R. Harvey said with regard to acute fulminating appendicitis, where an abscess has formed, we are taught in books to cut down and evacuate the pus and not to search for the appendix. His experience showed that there are usually many abscesses, and unless the appendix is removed and all infected cavities drained, the patient goes from bad to worse. With regard to appendicular dyspepsia, he thought somewhat similar symptoms may occur in floating kidney, gall-stones, or pelvic trouble. He mentioned a case of a young girl who had amenorrhœa and continuous pain. On opening her abdomen he found she had a long appendix adherent to the ovary and broad ligament. Her appendix was removed, and menstruation returned immediately. Where the appendix lies behind the cæcum the symptoms produced simulate those of acute biliary obstruction.

Mr. Stoney said there is a condition which explains the recurrence of pain when the appendix is removed, and that is the dilatation and abnormal mobility of the cæcum. There is a stasis of abnormal contents in the cæcum. The opening from the appendix into the cæcum is dilated, which results in the passage of the intestinal contents into the appendix and a chronic appendicitis is set up. These cases are supposed to be due to adhesions. He mentioned a case of a dilated and very movable cæcum which he operated upon. He sutured the

cæcum into position, placing a ligature between the posterior abdominal wall and the iliac fossa and two sutures between the anterior longitudinal band and the anterior abdominal wall. This operation was very successful in relieving the patient's symptoms. With regard to Dr. Haughton's method of ligaturing the stump of the appendix there is danger of locking up a certain amount of sepsis between the ligature and the purse-string suture. Pus may form and burst into the peritoneal cavity. He always ligatures the appendix with catgut instead of silk, and uses silk for the purse-string suture. A distinct hæmorrhage may occur from the vessels of the appendix where it is crushed and not ligatured, which hæmorrhage escapes into the cæcum.

Mr. Gunn said with regard to appendicular dyspepsia it was very difficult to distinguish between this and stomach troubles. He said that after removing the appendix one has taken away only a small part and not the whole of the trouble.

Mr. Blayney said it was very difficult to understand how an appendix which was distended at its distal end could produce hæmorrhage from the stomach or duodenum. There must be some other condition present besides the changes in the appendix. It matters very little how you treat the appendix stump. He treated several cases by simply snipping it off. Lately he crushes the base of the appendix and cuts through the crushed portion, and invaginates by a continuous suture. He did not think there was any danger of peritonitis following the operation in the cold stage. As regards dealing with adhesions, if there are any obvious adhesions in the form of bands these ought to be divided. If there are broad adhesions there is no use dividing these, as they are sure to form again. With regard to concretions found in the appendix during the course of operations for conditions other than those of appendicitis, in some cases he squeezed the concretions back again into the cæcum. Where this could be done he removed the appendix. When there is a definitely localised abscess it is a question whether one should look for the appendix or not. If the abscess is opened and drained the patient will almost certainly recover, but if one makes search for the appendix the danger is increased. It was his practice always to search for the appendix, but if this is not easily found he was content with simple drainage.

Sir C. Ball said the mortality following perforative peritonitis has much diminished since general flushing of the peritoneal cavity has been given up, but he agreed with Mr. Maunsell in flushing out in the case of perforation of the stomach, because the contents of the stomach are actively discharged and spread over a large area by active peristalsis. But in appendix cases there is no proper expulsion of the contents as there are no peristaltic movements, and subsequent sepsis is only local, and can be best met by careful swabbing out and drainage. With regard to adhesions about the cæcum where there is a difficulty in finding the appendix he mobilises the cæcum by dividing the parietal peritoneum on its outer side and throws the latter forward with all the adherent intestine. By getting to the back of the cæcum one can nearly always come down to the region of the appendix (although the appendix itself may be invisible). By dividing the appendix at its attachment to the cæcum, and then slitting the peritoneum and adhesions so as to expose the muscular coat of the appendix it is possible to work out the appendix from behind.

Mr. Maunsell said he had great success in flushing in stomach perforation. He had at first tried dry swabbing, and found he was doing harm. The peritoneal surface is knocked off more by rubbing than by flushing. He had performed the operation mentioned by Sir Charles Ball. In one case he shelled the mucous lining out of the adhesion, and the patient still had the muscular wall of the appendix in her abdomen. With regard to concretions in the appendix, if he was doing a major operation, such as removing an ovarian tumour or myoma, he would not meddle with the appendix, but if he found a diseased appendix in a small operation he would remove it. When dealing with acute appendicitis he never leaves an appendix in the abdomen, and this saves him the trouble of looking for it afterwards. He said pus can be found in the pelvis in 99 per cent. of cases.

Mr. Haughton said hæmorrhage must be rare if the clamp is used and the cautery on top of it. He agreed with Mr. Blayney that it was wrong to leave broad oozing surfaces after separating adhesions.

SANITARY AND METEOROLOGICAL NOTES.

Vital Statistics.

For four weeks ending Saturday, July 15, 1911.

IRELAND.

The average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended July 15, 1911, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 16.7 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,149,495. The deaths registered in each of the four weeks ended Saturday, July 15, and during the whole of that period in the several districts, alphabetically arranged, correspond to the following annual rates per 1,000. In some cases, owing to deaths not having been registered within the week in which they occurred, the rates do not fairly represent the weekly mortality :—

Towns, &c.	Week ending				Average Rate for 4 weeks	Towns, &c.	Week ending				Average Rate for 4 weeks
	June 24	July 1	July 8	July 15			June 24	July 1	July 8	July 15	
22 Town Districts	13.5	17.0	14.2	16.7	15.3	Lisburn -	12.9	17.1	12.9	8.6	12.9
Armagh -	20.6	6.9	—	6.9	8.6	Londonderry	8.9	14.1	8.9	19.2	12.8
Ballymena	9.2	18.3	22.9	9.2	14.9	Lurgan -	12.9	12.9	30.1	8.6	16.1
Belfast -	11.1	15.7	12.4	16.6	14.0	Newry -	8.7	4.4	21.8	21.8	14.2
Clonmel -	15.2	—	15.2	5.1	8.9	Newtownards	11.4	17.2	17.2	22.9	17.2
Cork -	19.7	18.4	15.8	11.6	16.4	Portadown	31.1	4.4	—	26.7	15.5
Drogheda -	4.2	16.8	8.4	4.2	8.4	Queenstown	19.8	33.0	6.6	6.6	16.5
Dublin - (Reg. Area)	15.1	19.5	13.9	20.9	17.3	Sligo -	14.0	14.0	—	9.3	9.3
Dundalk -	11.9	27.8	11.9	15.9	16.9	Tralee -	10.6	10.6	31.7	15.9	17.2
Galway -	3.9	35.4	15.7	11.8	16.7	Waterford	7.6	5.7	28.5	5.7	11.9
Kilkenny -	29.8	14.9	24.8	5.0	18.6	Wexford -	41.0	22.8	36.4	13.7	28.5
Limerick -	6.8	14.9	16.3	10.9	12.2						

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 22 districts during the week ended Saturday, July 15, 1911, were equal to an annual rate of 1.6 per 1,000, the rates varying from 0.0 in eighteen of the districts to 5.3 in Tralee. Among the 123 deaths from all causes for Belfast are one from whooping-cough, one from scarlet fever, and 9 from diarrhœal diseases. Of the 4 deaths from all causes registered in Dundalk one is from diphtheria.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock, and Kingstown. The population of this area is 407,057, that of the City being 313,526, Rathmines 37,528, Pembroke 29,368, Blackrock 9,013, and Kingstown 17,622.

In the Dublin Registration Area the births registered during the week ended Saturday, July 15, 1911, amounted to 190—89 boys and 101 girls; and the deaths to 172—88 males and 84 females.

DEATHS.

Omitting the deaths (numbering 10) of persons admitted into public institutions from localities outside the Area, the annual rate of mortality was 20.9 per 1,000. During the twenty-eight weeks ending with Saturday, July 15, the death-rate so corrected averaged 21.3, and was 2.3 below the mean rate for the corresponding portions of the ten years 1901–1910.

The total deaths registered, numbering 172, represent an annual rate of 22.2 per 1,000. The annual death-rate for the past twenty-eight weeks was 22.5 per 1,000, and the average annual rate for the corresponding period of the past ten years was 24.7 per 1,000 of the mean population for all deaths registered.

Included in the total deaths from all causes were 3 from enteric fever, 7 from measles, 3 from diphtheria, one death from whooping-cough, 3 deaths from scarlet fever, 5 from diarrhœa and *enteritis* of children under 2 years of age, and one death from influenza.

In each of the three weeks preceding, deaths from enteric fever were one, 0, and one: deaths from measles were 8, 7, and 4; deaths from whooping-cough were 2, 2, and 0; deaths from

diphtheria were 4, 2, and 2; deaths from scarlet fever were 0, 0, and one; deaths from diarrhœa and *enteritis* of children under 2 years of age were 4, 3, and 4; and deaths from influenza were 0, one, and one.

Of 32 deaths from tuberculous disease, 20 were caused by pulmonary tuberculosis, 4 by tubercular meningitis, one by tuberculosis of the vertebral column, one by tubercular disease of the kidney, and 6 by disseminated tuberculosis. Deaths from all forms of tuberculosis in the three preceding weeks were 18, 27, and 14 respectively.

There were 7 deaths from broncho-pneumonia, and 3 deaths were ascribed to *pneumonia* (type not distinguished).

The deaths of 4 persons were attributed to cancer.

Four deaths of infants were caused by congenital debility, 3 by prematurity, and one by congenital defects.

Organic diseases of the heart accounted for the deaths of 20 persons. There were 10 deaths from bronchitis.

The 7 deaths attributed to accident or negligence were as follows:—By vehicles (including one motor accident), 2 deaths: by burns, 2 deaths (of these one was of an infant under one year of age); by drowning, 2 deaths: and by suffocation in bed, one death of an infant.

In 5 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases include the deaths of 3 infants under one year of age, and the death of one person aged 71 years.

Forty-one of the persons whose deaths were registered during the week were under 5 years of age (25 being infants under one year, of whom 11 were under one month old), and 43 were aged 65 years and upwards, including 31 persons aged 70 years and upwards. Among the latter were 19 aged 75 years and upwards, of whom one (a male) was stated to have been aged 90 years.

The Registrar-General points out that the names of the cause of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," and the "Tuberculosis Prevention (Ireland) Act, 1908," as set

forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; by Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; by Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; by the Executive Sanitary Officer for Kingstown Urban District; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended July 15, 1911, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Small-pox	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Pyrexia (origin uncertain) [a]	Enteric or Typhoid Fever	Erysipelas	Puerperal Fever	Whooping-cough	Cerebro-spinal Fever	Tubercular Phthisis (*Phthisis*)	Total
City of Dublin	June 24	-	•	◦	18	1	-	7	-	2	9	3	-	◦	-	6	46
	July 1	-	◦	◦	13	-	-	14	-	1	15	10	-	*	-	11	64
	July 8	-	◦	*	18	-	-	6	-	1	11	4	-	*	-	5	45
	July 15	-	◦	*	11	-	-	10	-	1	8	1	-	*	-	7	38
Rathmines and Rathgar Urban District	June 24	-	•	*	1	-	-	-	-	-	-	1	-	*	•	◦	2
	July 1	-	•	*	-	-	-	1	-	-	-	-	-	•	◦	*	1
	July 8	-	•	*	-	-	-	-	-	-	-	-	-	•	*	*	-
	July 15	-	•	*	3	-	-	-	-	-	-	1	-	•	•	*	4
Pembroke Urban District	June 24	-	6	-	-	-	-	-	-	-	2	-	-	11	-	-	19
	July 1	-	5	-	-	-	-	-	-	-	-	-	-	7	-	-	12
	July 8	-	5	-	-	-	-	-	-	-	1	-	-	7	-	-	13
	July 15	-	1	-	-	-	-	-	-	-	-	-	-	12		-	13
Blackrock Urban District	June 24	-	•	•	1	-	-	-	-	-	-	-	-	•	-	•	1
	July 1	-	•	•	1	-	-	-	-	-	-	-	-	•	-	•	1
	July 8	-	•	•	-	-	-	-	-	-	1	-	-	•	-	•	1
	July 15	-	•	•	-	-	-	-	-	-	-	-	-	•	-	•	-
Kingstown Urban District	June 24	-	•	•	-	-	-	-	-	-	-	-	-	•	•	-	-
	July 1	-	•	•	-	-	-	-	-	-	1	2	-	•	•	-	3
	July 8	-	•	•	-	-	-	-	-	-	-	-	-	•	•	-	-
	July 15	-	•	•	-	-	-	-	-	-	-	-	-	•	•	-	-
City of Belfast	June 24	-	•	•	8	1	-	4	-	-	-	2	1	•	-	10	26
	July 1	-	•	•	7	-	-	8	-	-	-	4	1	•	-	11	31
	July 8	-	•	•	12	-	-	7	1	-	-	2	-	•	-	7	29
	July 15	-	•	•	8	-	-	4	-	-	1	1	-	•	-	10	24

[a] Continued Fever.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended July 15, 1911, 10 cases of measles were admitted to hospital, 18 cases were discharged, there was

one death, and 34 cases remained under treatment at the close of the week. In the 3 preceding weeks such cases had been 85, 54, and 43, respectively.

Eleven cases of scarlet fever were admitted to hospital, 22 were discharged, there were 3 deaths, and 59 cases remained under treatment at the close of the week, exclusive of 19 convalescents from the disease who were still under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the 3 preceding weeks the cases in hospital were 67, 69, and 73 respectively.

Two cases of typhus were discharged from hospital during the week, and no cases remained under treatment at its close.

Eleven cases of diphtheria were admitted to hospital, 15 were discharged, and there were 2 deaths. The cases in hospital, which at the close of the 3 preceding weeks numbered 32, 45, and 45, respectively, were 39 at the close of the week.

Six cases of enteric fever were admitted to hospital, 13 were discharged, there was one death, and 37 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the 3 preceding weeks having been 45, 54, and 45.

In addition to the above-named diseases, 3 cases of pneumonia were admitted to hospital, 12 were discharged, there was one death, and 17 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, July 15, in 77 large English towns, including London (in which the rate was 11.3), was equal to an average annual death-rate of 11.8 per 1,000 persons living. The average rate for 8 principal towns of Scotland was 14.9 per 1,000, the rate for Glasgow being 14.2, and for Edinburgh 18.9.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended July 15. From this report it appears that of a total of 46 cases notified, 19 were of phthisis, 15 of scarlet fever, 9 of diphtheria, 2 of erysipelas, and one of enteric fever. Among the 307 cases of infectious diseases in hospital at the close

of the week were 100 cases of scarlet fever, 59 of phthisis, 40 of diphtheria, 33 of measles, 55 of whooping-cough, 6 of erysipelas, 9 of chicken-pox, one of enteric fever, and one of puerperal fever.

Vital Statistics

For four weeks ending Saturday, August 12, 1911.

IRELAND.

The average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended August 12, 1911, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 17.1 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,149,495. The deaths registered in each of the four weeks ended Saturday, August 12, and during the whole of that period in the several districts, alphabetically arranged, correspond to the following annual rates per 1,000. In some cases, owing to deaths not having been registered within the week in which they occurred, the rates do not fairly represent the weekly mortality :—

Towns, &c.	Week ending July 22	Week ending July 29	Week ending Aug. 5	Week ending Aug. 12	Average Rate for 4 weeks	Towns, &c.	Week ending July 22	Week ending July 29	Week ending Aug. 5	Week ending Aug. 12	Average Rate for 4 weeks
22 Town Districts	16.8	16.4	16.8	17.1	16.8	Lisburn -	8.6	8.6	21.4	8.6	11.8
Armagh -	6.9	6.9	6.9	6.9	6.9	Londonderry	19.2	11.5	19.2	11.5	15.4
Ballymena	18.3	9.2	13.8	27.5	17.2	Lurgan -	17.2	8.6	8.6	8.6	10.8
Belfast -	16.3	14.2	16.6	16.3	15.9	Newry -	8.7	26.2	17.4	21.8	18.5
Clonmel -	20.3	—	15.2	10.1	11.4	Newtownards	—	17.2	22.9	34.3	18.6
Cork -	12.9	16.3	15.6	9.5	13.6	Portadown -	4.4	4.4	8.9	17.8	8.9
Drogheda -	16.8	8.4	21.0	4.2	12.6	Queenstown	—	6.6	—	13.2	5.0
Dublin - (Reg. Area)	19.8	22.5	18.9	20.7	20.5	Sligo -	9.3	4.7	14.0	14.0	10.5
Dundalk -	7.9	15.9	11.9	11.9	11.9	Tralee -	10.6	—	15.9	5.3	8.0
Galway -	11.8	11.8	7.9	7.9	9.9	Waterford -	19.0	15.2	17.1	20.9	18.1
Kilkenny -	9.9	9.9	14.9	39.7	18.6	Wexford -	22.8	9.1	13.7	18.2	16.0
Limerick -	20.4	13.6	12.2	13.6	15.0						

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 22 districts during the week ended Saturday, August 12, 1911, were equal to an annual rate of 5.4 per 1,000, the rates varying from 0.0 in nine of the districts to 11.4 in Newtownards—the 6 deaths from all causes for that district including 2 of children under 2 years of age—one from measles and one from *enteritis*. Among the 121 deaths from all causes for Belfast are one each from enteric fever, scarlet fever and whooping-cough, and 42 from diarrhœal diseases. Three of the 14 deaths for Cork are from diarrhœa, and 2 of the 10 deaths for Limerick are from diarrhœal diseases. Included in the 11 deaths from all causes for Waterford are 2 from *enteritis* of children under 2 years of age. Two deaths from diarrhœa are included in the 3 deaths for Dundalk, and among the 4 deaths for Portadown are 2 from *enteritis* of children under 2 years of age.

DUBLIN REGISTRATION AREA.

In the Dublin Registration Area the births registered during the week ended August 12 amounted to 210—112 boys and 98 girls—and the deaths to 169—86 males and 83 females.

DEATHS.

The registered deaths, omitting the deaths (numbering 9) of persons admitted into public institutions from localities outside the Area, represent an annual rate of mortality of 20.7 per 1,000 of the population. During the thirty-two weeks ending with Saturday, August 12, the death-rate averaged 21.2, and was 1.8 below the mean rate for the corresponding portions of the 10 years 1901–10.

The total deaths registered, numbering 169, represent an annual rate of 21.8 per 1,000. The annual death-rate for the past thirty-two weeks was 22.4 per 1,000, and the average annual death-rate for the corresponding period of the past ten years was 24.0 per 1,000 of the mean population for all deaths registered.

Among the total deaths from all causes registered were 2 from enteric fever, 2 from measles, 3 from scarlet fever, one death from whooping-cough, one death from dysentery, and 41 deaths from diarrhœa and *enteritis* of children under 2 years of age. There was one death from *cerebro-spinal meningitis*, and one death from influenza. In each of the three preceding weeks, deaths from enteric fever were 2, one, and 2; deaths from measles

were 3, 7, and 5; deaths from scarlet fever were 0, 2, and one; deaths from whooping-cough were 4, 3, and 4; and deaths from diarrhœa and *enteritis* of children under 2 years of age were 11, 34, and 29 (rising to 41 deaths in the week under notice).

The deaths from tuberculous disease comprised 13 deaths from pulmonary tuberculosis, 2 deaths from tubercular meningitis, one death from abdominal tuberculosis, and 2 deaths from disseminated tuberculosis. In the three preceding weeks tuberculosis caused 27, 32 and 25 deaths respectively.

Eleven deaths were attributed to cancer.

Of 8 deaths from pneumonia, one was from broncho-pneumonia, and 7 were from *pneumonia* (type not distinguished).

Diseases of the brain and nervous system caused the deaths of 16 persons, and included the deaths of 3 children under 2 years of age from meningitis, and 3 deaths from *convulsions* at the same age-period.

There were 9 deaths from organic diseases of the heart, and 8 deaths from bronchitis.

The deaths of 2 infants were from congenital defects, 3 were from prematurity, and one was caused by congenital debility.

There were 2 accidental deaths, one being caused by a railway wagon and one by a carriage.

In 7 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases include the deaths of 2 children under 5 years of age (one being an infant under one year), and the death of one person aged 68 years.

Seventy-two of the persons whose deaths were registered during the week ended August 12 were under 5 years of age (52 being infants under one year, of whom 11 were under one month old) and 26 were aged 65 years and upwards, including 21 persons aged 70 and upwards. Among the latter were 12 aged 75 and upwards, of whom 3 (a male and 2 females) were stated to have been aged 90, 91, and 95 years respectively.

The Registrar-General points out that the names of the cause of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889,"

and the "Tuberculosis Prevention (Ireland) Act, 1908," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; by Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; by Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; by the Executive Sanitary Officer for Kingstown Urban District; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended August 12, 1911, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Small-pox	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Pyrexia (origin uncertain) [a]	Enteric or Typhoid Fever	Erysipelas	Puerperal Fever	Whooping-cough	Cerebro-spinal Fever	Tubercular Phthisis (*Phthisis*)	Total
City of Dublin	July 22	–	*	0	18	–	–	10	–	1	9	12	–	*	–	10	60
	July 29	–	0	0	8	–	–	7	–	1	7	5	–	*	–	12	40
	Aug. 5	–	0	*	14	1	–	9	–	1	5	6	–	*	–	20	56
	Aug. 12	–	*	*	8	–	–	3	–		10	7	–	*	1	8	37
Rathmines and Rathgar Urban District	July 22	–	0	*		–	–	1	–	–	–	–	–	*	*	*	2
	July 29	–	*	*		–	–	3	–	–		3	–	0	0	*	6
	Aug. 5	–	*	*	–	–	–	2	–	–	–	1	–	0	*	*	3
	Aug. 12	–	0	*	1	–	–	1	–	–	–	–	–	*	*	*	2
Pembroke Urban District	July 22	–		–	2	–	–		–	–	–	–	–	16	–	–	18
	July 29	–	11	–	1	–	–	1	–	–	–	1	–	–	–	–	14
	Aug. 5	–	1	–	–	–	–	–	–	–	–	1	–	10	–	–	12
	Aug. 12	–		–	–	–	–	–	–	–	1	–	–	9		–	10
Blackrock Urban District	July 22	–	0	0		–	–		–	–	–	–	–	*	–	*	–
	July 29	–	0	*	–	–	–	–	–	–	–	–	–	*	–	*	–
	Aug. 5	–	0	0	–	–	–		–	–	–	–	–	0	–	–	–
	Aug. 12	–	*	0	–	–	–	–	–	–	–	–	–	*	–	*	–
Kingstown Urban District	July 22	–	*	*		–	–	–	–	–	–	–	–	*	*		–
	July 29	–	*	*	–	–	–	–	–	–	–	–	–	–	*	–	–
	Aug. 5	–	*	*	–	–	–	1	–	–	–	–	–	*	*	–	1
	Aug. 12	–	*	*	–	–	–	–	–	–	–	–	–	*	*	–	–
City of Belfast	July 22	–	0	*	6			6	–		5	2	–	*	–	12	31
	July 29	–	0	*	8	–	–	7	1	–	3	1	–	*	1	13	36
	Aug. 5	–	0	0	8	–	–	6	–	1	2	1	–	*	–	16	34
	Aug. 12	–	0	0	10	–		3		–	2	7	–	0	–	10	32

[a] Continued Fever.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended August 12, 1911, 5 cases of measles were admitted to hospital, 2 cases were discharged, there were

2 deaths, and 39 cases remained under treatment at the close of the week. In the 3 preceding weeks such cases had been 29, 35, and 38, respectively.

Sixteen cases of scarlet fever were admitted to hospital, 15 were discharged, there were 3 deaths, and 64 cases remained under treatment at the close of the week, exclusive of 21 convalescents from the disease who were still under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the 3 preceding weeks the cases in hospital were 66, 70, and 66, respectively.

One case of typhus remained under treatment at the close of the week.

Seven cases of diphtheria were admitted to hospital and 9 were discharged. The cases in hospital, which at the close of the 3 preceding weeks numbered 29, 28, and 27, respectively, were 25 at the close of the week.

Two cases of enteric fever were admitted to hospital, 5 were discharged, there were 2 deaths, and 29 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the 3 preceding weeks being 35, 31, and 34.

In addition to the above-named diseases, 2 cases of pneumonia were admitted to hospital, 3 were discharged, there were 2 deaths, and 14 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, August 12, in 77 large English towns, including London (in which the rate was 18.7), was equal to an average annual death-rate of 18.6 per 1,000 persons living. The average rate for 8 principal towns of Scotland was 14.4 per 1,000, the rate for Glasgow being 15.2 and for Edinburgh 12.2.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended August 12. From this Report it appears that of a total of 48 cases notified, 17 were of diphtheria, 15 were of phthisis, 14 of scarlet fever, and 2 of erysipelas. There were 309 cases of infectious diseases in hospital at the close of the week.

Meteorology.

Abstract of Observations made in the City of Dublin, Lat. 53° 20′ *N., Long.* 6° 15′ *W., for the Month of July*, 1911.

Mean Height of Barometer,	30.130 inches.
Maximal Height of Barometer (11th, at 9 a.m.),	30.575 ,,
Minimal Height of Barometer (30th, at 9 a.m.),	29.668 ,,
Mean Dry-bulb Temperature,	62.2°.
Mean Wet-bulb Temperature,	58.4°.
Mean Dew-point Temperature,	55.2°.
Mean Elastic Force (Tension) of Aqueous Vapour,	.439 inch.
Mean Humidity,	78.7 per cent.
Highest Temperature in Shade (on 13th),	78.2°.
Lowest Temperature in Shade (on 2nd),	45.6°.
Lowest Temperature on Grass (Radiation) (2nd),	42.8°.
Mean Amount of Cloud,	52.5 per cent.
Rainfall (on 14 days),	2.994 inches.
Greatest Daily Rainfall (on 29th),	1.242 ,,
General Directions of Wind,	W., N.E., E.S.E.

Remarks.

An extremely warm, summerlike month—a month of paradoxes, characterised by drought and yet with a rainfall in excess of the average and distributed over as many as 14 days. Up to the 19th, the rainfall was only .031 inch on 4 rain-days. Of the last 13 days 10 yielded a measurable rainfall. At the station in Fitzwilliam Square during the week ended Saturday the 29th rain fell on 5 days to the large amount of 2.291 inches. This large quantity included the product of a violent thunderstorm in the late afternoon of the 29th, when 1.212 inches of rain fell in 45 minutes. The forenoon was cloudy and hazy with some slight showers. The afternoon was warm and bright until after 4 p.m., when a sheet of electrical cirrus overspread the sky from S.S.E. The aspect of the clouds became more and more threatening. At 5 50 p.m. thunder was first heard towards the south. At 6 8 p.m. lightning was first seen. A violent thunderstorm then burst over the city. The thunder became almost continuous, and lightning flashed incessantly. Soon rain descended in torrents, 1.212 inches falling in some 45 minutes ended at 6 55 p.m., at which hour the storm passed away to the northward. The wind shifted to W.

in the middle of the storm. The barograph showed a sudden dip or fall, followed by an equally sudden rise of pressure. The following rainfall measurements in the thunderstorm have come to hand:—Clonsilla, Greystones, .30 inch; Coolagad, Greystones, .44 inch (.37 inch in 40 minutes); Fassaroe, near Enniskerry, Co. Wicklow, .56 inch in 35 minutes—a brief hailstorm before the rain yielded curiously shaped angular hailstones, with a whitish centre and an ice-envelope; Druid Lodge, Killiney, .97 inch; Dundrum, 1.111 inches at Manor Mill Lodge, 1.150 inches at Lynton; Trinity College, Dublin, 1.390 inches; the Royal Botanic Gardens, Glasnevin, 1.16 inches; the Ordnance Survey Office, Phœnix Park, 1.120 inches.

The first three days of the month were quite cool, the thermometer falling to 41° at Birr Castle on the 2nd, and to 36° or 37° at some central Scottish stations on the 3rd. But a change soon came and torrid heat was experienced, especially in England—on the 22nd the thermometer rose to 96° at Greenwich.

In Dublin the arithmetical mean temperature (63.5°) was 3.0° above the average of the 35 years 1871–1905 (60.5°); the mean dry-bulb readings at 9 a.m. and 9 p.m. were 62.2°. In the forty-seven years ending with 1911, July was coldest in 1879 ("the cold year") (M. T. = 57.2°). It was warmest in 1905 (M. T. = 63.8°); and in 1887 (M. T. = 63.7°). In 1910 the M. T. was 58.5°.

The mean height of the barometer was 30.130 inches, or 0.215 inch above the corrected average value for July—namely, 29.915 inches. The mercury rose to 30.575 inches at 9 a.m. of the 11th, and fell to 29.668 inches at 9 a.m. of the 30th. The observed range of atmospheric pressure was, therefore, 0.907 inch.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 62.2°, or 4.3° above the value for June, 1911. Using the formula *Mean Temp.* = *Min.* + (*Max.*—*Min.* × .465), the value was 63.0°, or 2.9° above the average mean temperature for July, calculated in the same way, in the thirty-five years, 1871–1905 inclusive (60.1°). The arithmetical mean of the maximal and minimal readings was 63.5°, compared with a thirty-five years' average of 60.5°. On the 13th the thermometer in the screen rose to 78.2°—wind, E.: on the 2nd the temperature fell to 45.6°—wind, N.W. The minimum on the grass was 42.8°, also on the 2nd.

The rainfall was 2.994 inches, distributed over 14 days. The

average rainfall for July in the thirty-five years 1871–1905, inclusive, was 2.680 inches, and the average number of rain days was 17. The rainfall, therefore, was above, whereas the rain days were below, the average. In 1880 the rainfall in July was very large—6.087 inches on 24 days; in 1896, also, 5.474 inches fell on 18 days. On the other hand, in 1870, only .539 inch was measured on 8 days; in 1869 the fall was only .739 inch on 9 days; and in 1868 .741 inch fell on but 5 days. In 1910, 2.400 inches fell on 16 days.

High winds were noted on 8 days, but never attained the force of a gale (8). Temperature reached or exceeded 70° in the screen on 21 days, compared with 4 days in 1910, 3 days in 1909, 9 days in 1908 and 1907, 10 in 1906, 17 in 1905, and 10 in 1904. The thermometer never failed to reach 60°. In 1888 the maximum for July was only 68.7°.

A solar halo was seen on the 6th, 7th, and 26th. Fogs were observed on the 7th, 12th, 28th and 29th. A violent thunderstorm occurred on the late afternoon of the 29th.

The rainfall in Dublin during the seven months ending July 31st amounted to 10.723 inches on 94 days, compared with 21,032 inches on 127 days in 1910, 15.377 inches on 106 days in 1909, 13.809 inches on 120 days in 1908, 14.358 inches on 127 days in 1907, 13.664 inches on 122 days in 1906, 11.022 inches on 109 days in 1905, 13.905 inches on 117 days in 1904, 19.072 inches on 131 days in 1903, 15.507 inches on 115 days in 1902, 11.432 inches on 93 days in 1901, only 7.935 inches on 80 days in 1887, and a thirty-five years' (1871–1905) average of 14.710 inches on 113 days.

At the Normal Climatological Station in Trinity College, Dublin, the observer, Mr. C. D. Clark, reports that the mean height of the barometer was 30.135 inches, the range of atmospheric pressure being from 30.596 inches at 9 a.m. of the 11th to 29.684 inches at 9 p.m. of the 17th. The mean value of the readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 63.8°. The arithmetical mean of the daily maximal and minimal temperatures was 63.2°, the mean maximum being 71.8°, and the mean minimum 54.1°. The screened thermometers rose to 81.0° on the 13th and 14th, and fell to 40.6° on the 3rd. On the 11th the grass minimum was 39.3°. Rain fell on 11 days to the amount of 2.853 inches, the greatest fall in 24 hours being 1.390 inches on the 29th. The duration of bright sunshine, according to the

Campbell-Stokes recorder, was 221.8 hours, of which 13.5 hours, occurred on the 8th, 11th and 13th. The mean daily duration was 7.2 hours. In July, 1904, there were 201 hours of bright sunshine; in 1905, 162.2 hours; in 1906, 184.8 hours; in 1907, 178.1 hours; in 1908, 174.3 hours; in 1909, 139.8 hours, and in 1910, 205.0 hours. The mean sub-soil temperatures at 9 a.m. were—at 1 ft., 62.8°; at 4 ft., 58.3°.

Dr. Arthur S. Goff reports that at Lynton, Dundrum, County Dublin, the rainfall was 2.59 inches on 11 days. The maximal fall in 24 hours was 1.15 inches, measured on the 29th. The mean temperature was 65.4°, the range being from 84° on the 13th to 48° on the 2nd. There was a severe thunderstorm on the 29th.

The rainfall recorded by Mr. George B. Edmondson at Manor Mill Lodge, Dundrum, was 2.41 inches on 9 days. Of this quantity, 1.11 inches fell in the thunderstorm of the 29th. The mean temperature was 64.9°, the thermometer rising to 81° on the 13th, and falling to 46° on the 2nd.

At Druid Lodge, Killiney, Co. Dublin, Mrs. Olive F. Symes registered a rainfall of 2.42 inches on only 8 days. The heaviest fall in 24 hours was .97 inch in the thunderstorm of the 29th.

Mr. T. Bateman reports that the rainfall at The Green, Malahide, Co. Dublin, was 2.095 inches on 13 days. The largest daily fall was .535 inch on the 27th. The mean shade temperature was 61.7°, the extremes being—highest, 77° on the 6th; lowest, 41° on the 1st.

Captain Edward Taylor, D.L., recorded a rainfall of 2.20 inches on 13 days at Ardgillan, Balbriggan, Co. Dublin. This measurement was .50 inch below the average and the rain-days were 2 in defect. The largest rainfall in 24 hours was .44 inch on the 27th. Since January 1, 1911, 13.07 inches of rain have fallen at Ardgillan on 94 days, the precipitation being 2.07 inches under the average and the rain-days 14 in defect. The shade temperature in July ranged from 42.8° on the 2nd to 75.5° on the 12th.

Miss C. Violet Kirkpatrick reports a rainfall of 1.83 inches on 13 days at Cheeverstown Convalescent Home, Clondalkin, Co. Dublin. The heaviest fall in 24 hours was .44 inch in the great thunderstorm of the 29th.

At the Ordnance Survey Office, Phœnix Park, rain fell on 12 days to the amount of 2.306 inches, the greatest rainfall in 24 hours being 1.120 inches on the 29th. The total duration of

bright sunshine was 201.5 hours; the greatest daily sunshine being 15.2 hours on the 14th. The thermometer rose to 81.8° in the screen on the 13th, having fallen to 41.6° on the 11th.

Dr. Christopher Joynt, F.R.C.P.I., recorded a rainfall of 2.997 inches on 13 days at 21 Leeson Park, Dublin. The greatest fall in 24 hours was 1.260 inches, which occurred in the thunderstorm of the 29th.

Dr. J. H. M. Armstrong reports that the rainfall at Coolagad, Greystones, Co. Wicklow, was 2.64 inches on 13 days, the maximal daily fall being .60 inch on the 26th. Since January 1, 1911, the rainfall at that station equals 9.65 inches on 77 days.

Dr. W. S. Ross returns the rainfall at Clonsilla, Greystones, as 2.33 inches on 12 days, the maximal measurement in 24 hours being .52 inch on the 26th. The thermometer in the screen ranged from 44° on the 2nd to 80° on the 26th. The mean maximum was 70.5°, the mean minimum 53.1°, and the mean temperature 61.8°.

At Cork Mr. W. Miller registered 2.97 inches of rain on 8 days, the fall being 0.39 inch over the average for July, whereas the rain-days were 6 in defect. The greatest rainfall in 24 hours was 0.92 inch on the 31st. There were 19 consecutive days without rain before the 18th. Since January 1, 1911, 15.80 inches of rain have fallen in Cork on 90 days, the measurement being 3.99 inches under the average for the first seven months of the year, and the rain-days being 17 in defect. Thunder and lightning occurred on the 25th and 29th. Hail fell on the latter date.

At the Rectory, Dunmanway, Co. Cork, the Rev. Arthur Wilson, M.A., recorded a rainfall of 3.45 inches on 10 days. The heaviest falls in 24 hours were—1.15 inches on the 29th, and .79 inch on the 25th. There was no rain till the night of the 19th. The weather was especially hot from the 10th to the 14th. There was a great storm of thunder and lightning on the 29th at noon with heavy rain. A second thunderstorm occurred at 11 p.m. of the same day.

At Derreen, Kenmare, Co. Kerry, Mr. W. Holbrow measured 4.36 inches of rain on 10 days, the maximum in 24 hours being .78 inch on the 31st. At Derreen the weather was very fine and warm to the 19th, from which date to the close heavy showers fell, accompanied by thunder on the 25th and 29th. Great drought prevailed from the 5th to the 19th.

PERISCOPE.

THE BRITISH MEDICAL ASSOCIATION MEETING AT BIRMINGHAM.

An attractive feature of the exhibit of Messrs. Burroughs, Wellcome & Co. was the fine collection of medicinal plants grown at the "Wellcome" Materia Medica Farm. These plants are raised under ideal conditions, and their cultivation near the "Wellcome" Chemical Works and under the superintendence of experts has resulted in the selection and maintenance of the strains of each plant best for medicinal purposes. Among products which are the result of chemical and pharmacological research one of the most noteworthy is "Epinine." This substance is presented as a colourless one per cent. solution enclosed in 10 c.c. and 25 c.c. bottles and also in hermetically-sealed "Vaporole" containers. Its action resembles that of the supra-renal gland active principle, but the rise of blood-pressure produced is more prolonged. "Lodal" is a salt of an alkaloid prepared by the oxidation of laudanosinè, and is closely related chemically to hydrastanine and cotarnine. It has been used with advantage in cases of uterine hæmorrhage. Three products—"Ernutin," "Ergotoxine" and "Tyramine," which are the result of special research in regard to ergot—illustrate the modern preference for standardised preparations of active principles in place of variable extracts. Substances of animal origin are obtaining an increasing place in medicine, and are well represented at this exhibit. "Tabloid" and "Vaporole" thyroid gland and pituitary gland being prominent examples. The series of "Wellcome" serums, vaccines and tuberculins which also come under this heading are interesting to the modern physician as representing one of the most hopeful developments of Modern Medicine. The serums, &c., issued under this brand are prepared with the utmost care, and under the direct supervision of skilled bacteriologists at the Wellcome Physiological Research Laboratories. A concentrated diphtheria antitoxin has recently been introduced under the "Wellcome" brand containing 1,000 antitoxic units in 1 c.c. or less of fluid. This concentration, which presents a decided improvement over

the more bulky injections, has been effected by the introduction of a new technique utilising salt precipitation and eliminating inert proteins. A great variety of very convenient "Tabloid" and "Soloid" equipments for special occasions and requirements was shown. These include "Tabloid" Medicine Chests, Physician's Emergency Case, "Soloid" Blood Test and Bacteriological Cases and other outfits well adapted for the requirements of the specialist as well as for the general practitioner, and also for travelling expeditions and lengthy journeys.

INTERNATIONAL CONGRESS ON TUBERCULOSIS, ROME.

Dr. J. J. Perkins, Honorary Secretary of the National Association for the Prevention of Consumption, informs us that it has been decided by the Rome authorities to postpone the International Congress on Tuberculosis which was to have been held in Rome from September 24th to the 30th, 1911, to *next April*, when further particulars will be sent to those who purposed to attend the Congress or are interested in the subject.

A NEW ITALIAN MEDICAL JOURNAL.

We have received some copies of the newly published bi-monthly review, *Rivista Ospedaliera*, from the editor-in-chief, Dr. Nicola Sporza, principal physician to the Holy Ghost Hospital, Sassia. One of the characteristic features of the review is its bibliographical lists of the original articles in the principal weekly European medical papers, in which the titles of the articles are arranged according to the subject-matter after the manner of the Index Medicus. To the ninth and tenth numbers Dr. A. Cimoroni contributes a paper on the "Surgery of the Lungs and Pleuræ." His conclusions in favour of operative interference are shown from a large number of cases of lung injury, complicated in some cases with injury to the heart, and in others with injury to the abdominal viscera, and in many cases with fracture of the bones bounding the thoracic cage. The author considers that skiagraphs have so facilitated our diagnosis of thoracic lesions that surgical interference is now made possible in almost all injuries to the thoracic viscera. And from his personal experience he assures us that such surgical interference is not unusually difficult nor unsuccessful. Professor Sante contributes an article on "Lunacy and Abnormal Psychic Conditions."

He classifies lunatics into five groups: cerebropathic, biopathic, psychopathic, neuropathic, and those of a mixed type. His abnormal psychic group is sub-divided into deficients, unstable, mixed and the super-sensitive. The grounds for this classification form the matter of a most interesting and and highly suggestive article. We heartily welcome our new contemporary, and congratulate Medicine on the birth of a scientific and high-toned review, to whom we wish many years of usefulness.

LITERARY INTELLIGENCE.

Dr. Frederick Taylor has just finished seeing through the Press the ninth edition of his well known "Practice of Medicine." The work, which was ready by the middle of August, is now being issued in a larger size, and it has been very thoroughly revised. Considerable alterations and additions have been made in the subjects of cholera, dysentery, aphasia, hysteria, obstruction of the bronchi, phthisis, the physical examination of the heart and vessels, colitis and appendicitis, ankylostoma, gall-stones, anæmia and leukæmia, diabetes and functional albuminuria; and a short notice of methods of treatment has been included in the introduction. The subjects new to this edition are pellagra, meralgia, paræsthetica, pneumococcal meningitis, myotonia congenita, enterospasm, Hirschsprung's disease, intermittent claudication, congenital family cholæmia, peritoneal adhesions, lymphatism, bacilluria and pneumaturia. The illustrations in the text have been increased to sixty-seven in number. Messrs. J. & A. Churchill are the publishers.

HEREDITY IN THE CAUSATION OF TUBERCULOSIS IN CATTLE.

A pamphlet has just been issued by the Royal Agricultural Society of England entitled "Tuberculosis as regards Heredity in Causation and Elimination from Infected Herds," which cannot fail to be of the greatest interest to all connected with the breeding of live stock in this country. The first part of the article is devoted to the importance of heredity in the causation of tuberculosis. The statistical and other evidence bearing on the influence of heredity is examined, and reasons are given for maintaining that the hereditary transmission of a special pre-disposition to the disease is not in the present conditions of breeding a factor of serious importance. It is admitted that in

a small proportion of cases the calves dropped by tuberculous cows are tuberculous at the time of their birth, but it is held to be improbable that the disease is ever handed on from the male parent to the unborn fœtus. The second part of the article describes in detail the methods by which tuberculosis may be eliminated from a tuberculous herd. The difficulties encountered in different circumstances are fully considered, and the principal causes of failure in attempts to get rid of the disease are pointed out. The pamphlet is published for the Society by Mr. John Murray, 50A Albemarle Street, London, W., at the price of one shilling. Members of the Society may, on application to the office at 16 Bedford Square, London, W.C., obtain copies at half price.

VII CONGRESSO INTERNAZIONALE DI DERMATOLOGIA E SIFILOGRAFIA. ROMA, APRILE, 1912.

THE Committee begs to inform our readers that the 7th International Congress of Dermatology and Syphilography will be postponed until the middle of April, 1912. This delay is due to the fact that many of the Foreign Committees have found the month of September very unsuitable for their members. The President of the Congress is Senatore Prof. Tommaso de Amicis, 47 Via Medina, Naples. The General Secretary is Dr. Gaetano Ciarrocchi, 5 Piazza Grazioli, Rome.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE Course of Post-Graduate Study for 1911 will commence on Monday, September 18, and terminate on Tuesday, October 10. The object of the Course is to render available the whole of the clinical material in Dublin for the Post-Graduate Student, so that he may see as much as possible during the brief time at his disposal. The fee for the Course is Five Guineas, which is inclusive and entitles the Post-Graduate Student to participate in every section mentioned in a syllabus, which, together with all further information, may be obtained on application to the Secretary of the Post-Graduate Course, Royal College of Surgeons in Ireland.

THE DUBLIN JOURNAL

OF

MEDICAL SCIENCE.

OCTOBER 2, 1911.

PART I.

ORIGINAL COMMUNICATIONS.

ART. XI.—*A Review of the Vital Statistics of Ireland since 1864.*[a] By SIR WILLIAM J. THOMPSON, M.D. Dubl., F.R.C.P.I., Registrar-General for Ireland.

My first duty is to thank the Council of the Royal Institute of Public Health for the honour they have conferred on the General Register Office, Ireland, by electing me as President of this Section. The honour is the more appreciated by myself and the staff of the department having regard to the fact that there is not a Section dealing with Vital Statistics included in the Congress programme every year.

My second duty is, as President, to introduce the work of the Section by an Address. Personally I am of the opinion that a sectional president's address should be short, if indeed one should be given at all, and I assure you I will on this occasion put my convictions into practice.

The subject on which I propose briefly to address you is "A Review of the Vital Statistics of Ireland since 1864."

[a] A Presidential Address delivered before the Section of Vital Statistics in the Dublin Congress of the Royal Institute of Public Health on Tuesday, August 15th, 1911. [This Address was illustrated by a number of photographic and pictorial slides, of which a list is appended at page 250.

The reason for taking 1864 as the starting point is that the General Register Office for Ireland was first opened on the 1st of January of that year, twenty-seven years in the wake of the English Office and nine years after that of Scotland. This Office, as it is now constituted, is therefore forty-seven years old, although the registration of Protestant marriages dates back to 1845, so that we are able to review approximately half a century's record of marriages, births, and deaths.

The effects on the social and economic conditions of the population of a country, caused by its numerical variations, are most important factors in the science of Vital Statistics. I think we can safely say there is no country in Europe which has so steadily declined in population as Ireland since the year 1845. From the slide on the screen, which gives a comparative view of the Census populations for nine decades, it will be seen that the population increased in 1831 and 1841, and that decreases were recorded in 1851, 1861, 1871, 1881, 1891, 1901, and in the present year, 1911. We observe with pleasure that the decrease for the last decennial period is only 1·7 per cent. This fact, together with other favourable economic indications, fills us with the hope that it may be the pleasing duty of the Census Commissioners in 1921 to chronicle an increase.

The first published Annual Report of the Registrar-General for Ireland was that for the year 1864, and the last for the year 1910. This slide exhibits the main elements of change in the period between these years, and what we see is, on the whole, encouraging, if we exclude for the present the decreased population. The rates for births, deaths, and marriages have not varied much, but the emigration-rate is much lower. We will, however, get a better idea of the variations which have taken place between the years in question if we take an average of the four decennial periods, 1871 to 1880, 1881 to 1890, 1891 to 1900, and 1901 to 1910.

The next slide shows this very distinctly. The birth- and death-rates have varied little for the past thirty years, the marriage-rate shows an upward tendency, and the rate for emigration a decided fall.

We have good reason to be pleased with the birth-rate, seeing that in France, England, the United States, and other countries it shows a steady and continuous decrease. That it has shown so little variation in this country is the more remarkable, having regard to the high rate of emigration during the past thirty years, and to the fact that practically 85 per cent. of emigrants leave between the ages of fifteen and thirty-five, the period in the life of the individual which is of the most economic value to the State.

I do not wish to weary you with figures, but I may say that the average annual number of emigrants for the ten years, 1900–1909, was 35,886. Comparing these figures with those for the preceding decennial period, we find that there was a very great decrease on the ten years, 1890–1899, the average annual number emigrating being 44,955, while going back for a further decennial period, 1880–1889, we get the appalling average annual number, 80,491. If we compare the number of emigrants last year, 32,457, with this figure, 80,491, we see that it represents a decrease of 48,000 from the average for 1880–1889. The lowest number recorded was that for 1908, 23,295, which was followed in 1909 by an increase in the estimated population. The future student of Irish history will note with interest that the emigration rate in the ten years, 1901–1910, was practically only half what it was in the decade 1881–1890.

I may add that the emigration figures for the present year, up to the end of July, show a decrease of 353, as compared with the same period of last year.

I have said that the average yearly decrease in emigration for the period 1900–1909 compared with the period 1880–1889 was about 48,000, and this decrease is having its effect on the marriage rate, which as you see for the past twenty years has, if anything, increased. The upward trend of the marriage-rate is a good sign of increasing prosperity, as it is generally recognised that people do not engage in matrimony in times of commercial or agricultural depression.

The next slide shows for the past twenty years, in diagrammatic form, the relative rates of increase or decrease per

1,000 for marriages, births, deaths, and emigration, respectively.

If we investigate the death-rate further, which in the period under review has shown a tendency to fall, we find that the deaths from practically all the principal epidemic diseases have become less in number. In the following diagrams the death-rates for these diseases are illustrated in quinquennial periods from 1866 to 1910. In the first of these periods the rate for scarlet fever was so high as 5.5 per 10,000 living, at which figure it remained for about ten years. It then commenced to fall, and has continued to do so steadily ever since, until it has now reached the low figure, 0.3. Scarlet fever is essentially a children's or young people's disease. The reduction of its death-rate in Ireland is much to the credit of the medical profession and all those working in the field of public health.

From an investigation of the rates for typhus fever, as exhibited in the diagram, we see that the death-rate has fallen from 1.4 in the quinquennial period, 1871 to 1875, to 0.1 in the last period shown.

We come now to enteric fever, the death-rate for which you see from the slide has fallen from 1.8 per 10,000 for the period 1871–1875 to 0.8 for the period 1906–1910. Typhoid fever, considered generally, is a disease of middle life, and the saving of life at that age is a most valuable asset to the country. These three fevers—scarlet fever, typhus, and typhoid—are compulsorily notifiable diseases, and the substantial reduction of their death-rates in Ireland is a strong and, in my opinion, an unanswerable argument in favour of compulsory notification of infectious diseases.

This point comes out more prominently and forcibly when we examine the charts for measles and whooping-cough, epidemic diseases which are voluntarily notifiable. From the chart for measles we see that the death-rate per 10,000 living was 1.9 for the period 1866–1870, and 1.4 for the period 1906–1910. Again, the death-rate for whooping-cough only shows a fall of 0.9—viz., from 3.3 to 2.4 for the same periods.

I feel confident that almost every one here will agree with

me when I say that had notification been compulsory for these two zymotic diseases in the period under review a greater saving of life would have been effected. Besides, as the complications of both whooping-cough and measles are, for the most part, pulmonary, there can be no doubt that in many instances the patients who recovered from either disease succumbed later on to tuberculosis.

The Registrar-General can deal only with figures, not with causes and effects; but this point—viz., that the death-rate for infectious diseases which are compulsorily notifiable has decreased much more than that for infectious diseases which are voluntarily notifiable—is one, in my opinion, deserving the serious consideration of all those who have the health and welfare of our country at heart.

Tuberculosis is now recognised as an infectious disease, and the active campaign carried out as a part of the propaganda of the Women's National Health Association, an association inaugurated, guided, directed, and presided over by the President of our Congress, reinforcing and co-operating with the efforts of local health authorities, has had a most telling effect since its inception in 1907, as shown in the reduction of the death-rate. Two pillar diagrams, one for the year 1907 and the other for last year, exhibit the death-rates for the principal causes of death. You will see how much the pillar representing tuberculosis has shortened in the period. The slide now on the screen illustrates the fall, in four years, from 2.7 to 2.3 per 1,000 living, the lowest rate yet recorded.

These rates may be otherwise demonstrated by the following figures:—

1. There were 1,663 fewer deaths from tuberculosis in 1910 than in 1907; and
2. This number represents a decrease of no less than 32 deaths per week as compared with the number in 1907.

The next slide shows a comparison of the tuberculosis death-rate in England, Scotland, and Ireland since 1864. From the remarkable decline of the death-rates in England and Scotland it may be fairly assumed that anything or every-

thing that tends to better the condition of the people—housing, food, good working accommodation, &c.—lowers not only the general death-rate, but also that for tuberculosis. In the same way our general death-rate will fall as the rate for tuberculosis lessens, as those conditions which tend to stamp out tuberculosis will improve the health of the people, and, consequently, there will be fewer deaths.

We will now consider two important diagrams. The first shows the death-rate for males and females—(*a*) from all forms of tuberculosis, and (*b*) from phthisis. We see these are about equal.

The second diagram shows the death-rate per 1,000 living at various age periods—(1) males, and (2) females. From a comparison of the sexes as shown here it will be seen that the female sex has the higher death-rate between the ages 10–15 and 15–20, the figures for the first period being—females, 1.7; males, 0.9; and for the second period—females, 2.8: males, 2.1, respectively; while for all the other periods except the last (eighty-five years and upwards) the male death-rate is the higher, particularly so in the period 45–55, when it is 2.7, the female rate at that period being 1.9. This is the first time this point has been so clearly brought out, and it is most instructive. It certainly gives us cause for reflection.

Next let us consider infant mortality.

When we come to consider the deaths of infants under one year, our general death-rate in Ireland for such is comparatively low, and we compare favourably with both England and Scotland. For example, this slide shows the rate of infant mortality for the three countries:—

Ireland, for the year 1909, 92 per 1,000 births registered.
England, for the year 1909, 109 per 1,000 births registered.
Scotland, for the year 1908, 121 per 1,000 births registered.

In 1910 our rate increased slightly—95 per 1,000 births. This diagram also tells us that for the past few years the infant mortality rate for England has decreased, whereas ours has remained about stationary. It is a well-known fact that in England and Scotland a vigorous campaign, both voluntary and in connection with the Early Notification of

Births Act, has been going on in regard to this high infant death-rate, and we now see with what beneficial results in England. In Ireland the infant death-rate in Dublin, Belfast, and Cork compares somewhat unfavourably with some of the great English and Scotch towns, but the rate in the rural districts, as in all agricultural countries, is low; hence our average rate is less than three figures. There is, therefore, an opening in these three cities for good and effective work, and we hope as the Early Notification of Births Act has been adopted in Belfast and in this city, and as strenuous efforts are being made by the Women's National Health Association in this direction, that the Medical Superintendent Officers of Health will be in the pleasant position of being able to chronicle a substantial decrease in the infant death-rate within a short time.

In connection with this an additional diagram shows the principal causes of deaths of children under one year. The high column is headed "atrophy and debility," and as we see is practically double the height of the next, which is that of diarrhœal diseases. These two are the most frequent causes of infants' deaths, and it is a recognised fact that a large number of these deaths might be prevented. We cannot, I think, blame the mothers too much because they have never had the opportunity of studying or of being instructed in the management of infants, and lack of nourishment from absolute poverty and the evils consequent on over-crowded and bad housing are responsible for much. Efforts, however, such as the establishment of milk depots, are now being made, both by municipalities and philanthropic associations, and there are also various schemes to instruct mothers and daughters as to the proper food for infants, the quantity of a meal depending on the age and strength of the baby, regularity of meals, &c.

In this respect we claim that in some ways Ireland has been a pioneer, for instance, in the establishment of Babies' Clubs, another of the many good works inaugurated under the auspices of your noble President.

Turning now to diseases which show an upward death-rate tendency, influenza and cancer stand out most prominently.

Twenty-two years ago influenza was almost unknown amongst us, but for the past twenty-one years it has claimed a great number of victims. The rates of death for this disease are particularly high for the two years 1892 and 1900, respectively.

I think the medical profession will agree with me that the deaths from influenza are too numerous. This is owing, in a great measure, to the fact that it often comes on insidiously, and patients or their friends do not recognise its seriousness, with the result that the doctor is not called in until too late. It is a well-known fact that many valuable lives have been thus sacrificed.

Incidentally this leads up to another subject to which I have drawn special attention in my Reports for the years 1909 and 1910—that is, the high percentage of uncertified deaths in Ireland. Compared with England and Scotland the proportion is very great.

The Irish people have the name of being, and are, most humane and kindhearted, but an outsider knowing nothing of our warmhearted nation, and looking at these figures from a statistical point of view, would be justified in condemning us as a most unsympathetic race, neglectful of providing proper medical care for our sick, particularly the young and old. It is a well recognised and admitted fact that no profession does so much gratuitous work as the medical profession, and there is, therefore, no cause for such a large percentage of uncertified deaths, medical aid being easily procurable for our poorest people. I do hope all will realise this is a grave stigma, and it is to be hoped that, with the help of the medical profession and the co-operation of our people, this serious defect on our records will soon disappear.

The other disease which has increased, not only in Ireland, but also in England and Scotland, is cancer. Last year there were no less than 3,664 deaths registered in Ireland from malignant disease. This slide shows the death-rate from cancer in Ireland compared with the two sister countries, and we find that with us it has risen from 2.7 per 10,000 living in 1864 to 8.4 in 1910, an increase of 5.7. In England the increase has been 5.6, from 3.9 per 10,000 living in 1864 to 9.5 in 1909,

and in Scotland the death-rate for this disease has ranged from 4.3 in 1864 to 9.6 in 1908, an increase of 5.3. Ireland shows a greater increase than England or Scotland. It is asserted by some medical authorities that this is more apparent than real, and that the increase is due, in part at least, to a more accurate diagnosis of malignant disease. This is a theory which it is difficult to contradict definitely, and, if true, it applies equally to England and Scotland. Indeed, with the advance of medical education for students and the introduction of post-graduate classes, there can be no doubt that medical men are more scientifically trained, and, consequently, likely to be more accurate in diagnosis. Besides, certain morbid conditions are now classified as cancer that some quarter of a century ago were not placed in this category. We all know what an amount of research work has been going on for years past in connection with this fell disease, not only in this country, but in every country in the world, and we all earnestly hope that within a short period of time science will solve the mystery of cancer, and that we may be able eventually to eradicate it.

Briefly summing up the deductions to be drawn from this short review of Irish Vital Statistics for the past forty-seven years, we find that :—

1. Emigration has enormously decreased.
2. The birth-rate, notwithstanding emigration and a decreasing population, has remained almost stationary.
3. The marriage-rate has increased of late years.
4. The death-rate, after many fluctuations, is decreasing.

If to these we add some facts which have been brought out in the Preliminary Report of this year's Census, facts of such significance as would require a separate paper :—

(*a.*) The number of inhabited houses in Ireland has increased.

(*b.*) The number of houses being built has also increased.

(*c.*) The number of families has increased.

(*d.*) The number of uninhabited houses has decreased—

we cannot do otherwise than conclude that Ireland is to-day

a better, healthier, and more prosperous country than it was half a century ago.

I have no doubt that when this Institute meets again in Dublin the General Register Office will be able to record a continued and more marked improvement.

LIST OF SLIDES.

1. Pillar diagram of population of Ireland for nine decades. 1831–1911.
2. Population, births, deaths, marriages, and emigration for 1864 and 1910.
3. Population, births, deaths, marriages, and emigration for four decennial periods, 1871–80, 1881–90, 1891–1900, and 1901–1910.
4. Diagram showing births, deaths, marriages, and emigration for past twenty years.
5. Diagram showing decline of scarlet fever in quinquennial periods since 1866–70.
6. Diagram showing decline of typhus fever in quinquennial periods since 1871–75.
7. Diagram showing decline of typhoid fever in quinquennial periods since 1871–75.
8. Diagram showing decline of measles in quinquennial periods since 1866–70.
9. Diagram showing decline of whooping-cough in quinquennial periods since 1866–70.
10. Pillar diagram showing deaths from twenty-two principal diseases—tuberculosis prominent, 1907.
11. Similar diagram to ten—tuberculosis less prominent—1910.
12. Diagram showing death-rate for tuberculosis from 1900—marked decline since 1907.
13. Diagram showing comparative death-rate for tuberculosis for England, Scotland, and Ireland, since 1864.
14. Diagram showing death-rate for males and females for—(*a*) phthisis. (*b*) all forms of tuberculosis, since 1864.
15. Diagram showing tuberculosis death-rate for males and females for age periods from fifteen years upwards.
16. Diagram showing infant death-rate for England, Scotland, and Ireland, from 1864.
17. Pillar diagram showing principal causes of infants' deaths.
18. Diagram showing death-rate for influenza for twenty years.
19. Diagram showing comparative death-rate for cancer for England, Scotland, and Ireland, since 1864.
20. Diagram showing distribution of cancer in Ireland—Cancer counties.

ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

THE 73rd Annual Show of the Royal Agricultural Society of England will be held at Doncaster (on the Race Course) from Tuesday, July 2nd, till Saturday, July 6th, 1912.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Chronicles of Pharmacy. By A. C. Wootton. Two Volumes. London : Macmillan & Co., Ltd. 1910. 8vo. Pp. xii + 332. With numerous Illustrations.

In 1879 Macmillan & Co. published the second edition of Fluckiger and Hanbury's History of the Principal Drugs of Vegetable Origin met with in Great Britain and British India : in 1880 the Pharmaceutical Society of Great Britain published Bell and Redwood's Historical Sketch of the Progress of Pharmacy in Great Britain, but still there is plenty of room in our libraries for the volumes before us. Fluckiger and Hanbury's work deals with the history and pharmacology of individual drugs, the work of Bell and Redwood is mainly concerned with the political history of the pharmacists, but Wootton's work is more general in its design and more anecdotal in its execution than either of them. We regret to think that the Author did not live to see his work published and to receive our thanks for the pleasure which a study of it has given us.

Mr. Wootton traces the history of pharmacy from the myths of prehistoric time through Egypt of the Pharaohs, through biblical history, through the golden age of Greece, during the wanderings of the followers of the Prophet, through the revival of learning in Europe, and down to our own time. Every phase of this history is illustrated by anecdote and by biographical details not only of those who made the study of drugs their life work, but of those who were mere dabblers in the science. The student of Medicine will meet with many familiar names not only of men, but of medicines, and of each he will learn something that will make their individuality more real, and of many something that will be of use to him in his own work.

On the whole our author has succeeded in getting his historical details accurate—a matter of no little difficulty in such a work—but he has fallen into a common error in discussing the history of surgical anæsthesia. He states quite correctly that Dr. Long of Athens, Georgia, U.S.A., claimed to have removed a tumour under ether anæsthesia in the year 1842, but hints that this claim has not been rigorously established. Documentary evidence leaves no room for doubt that Dr. Long did designedly produce ether anæsthesia in 1842, but he made no publication of his discovery till after Morton had put forward his claims as the discoverer of anæsthetics. Let us give all honour to Dr. Long for his brilliant work, even though we believe it detracts nothing from the fame of Morton as the true discoverer of anæsthesia.

This, however, is a small matter, and in no way detracts from the general value of the work, a study of which we cordially recommend to all medical men.

Conferences on the Moral Philosophy of Medicine. Prepared by J. W. S. Gouley, M.D. London and New York : Rebman Co. N.D. 8vo. Pp. xvi + 368.

The medical student cannot complain of lack of quantity in the information offered to him by his teachers at the present day. There is, however, room for doubt whether this information is always of the kind most suitable for the needs of the young physician entering practice. Many subjects, which seem of the first importance, are necessarily crowded out of the curriculum, and among these we should give first place to Medical Ethics. A man who joins the ranks of the ancient and honourable profession of Medicine should know something of the traditions and rules of conduct of that profession. The title of Physician should connote more than a mere knowledge of medicine and surgery, and it would seem to be the duty of the schools to see that their pupils are supplied with this further knowledge. The schools have as yet not done this, and some authoritative statement of the general code of medical ethics is badly needed for the student in these countries. Dr. Gourley in the "Conferences" before us has

attempted to supply this want, and incidentally has given much good advice to those who contemplate joining our profession. The chapters which interested us most are those dealing with medical morals. The teaching given is founded on the National System of Medical Morals adopted in the year 1847 by the American Medical Association. This system is founded largely on the teaching of Dr. Percival, of Manchester, and we heartily commend a study of it to every medical man. If it were for nothing else for the publication of the text of this system, Dr. Gourley deserves our thanks, and we hope that as a result of his efforts the system will be more widely known on this side of the Atlantic than it seems to be at present.

A Treatise on Diseases of the Eye. By JOHN ELMER WEEKS, M.D. With 528 Engravings and 25 Full-page Plates in Colours. London: Henry Kimpton; Glasgow: Alexander Stenhouse. 1911. 8vo. Pp. 944.

NEW YORK has once more given to the ophthalmological world a valuable text-book.

The author, in his preface, says that "in the preparation of this volume it has been his design to produce a treatise on ophthalmology that will enable the undergraduate in medicine to obtain a sufficiently comprehensive and trustworthy knowledge of the subject, a book to which the practitioner of medicine may refer for information regarding questions concerning the eye, and also a book which may be of use to the specialist in ophthalmology."

The first two chapters are devoted to the Embryology and Anatomy of the Eye. Then follows one on the general principles of Optics. The author thinks it is convenient to have them included in the one volume, since a knowledge of these subjects is necessary to a full understanding of the pathological processes discussed.

Again, at the end of the volume are chapters on the "relation of diseases of the throat and nose and the accessory sinuses to the eye," "special remedies," and the "preparation of specimens for diagnosis in the search for organisms."

The chapter on the conjunctiva and the micro-organic origin of its diseases is, as might be expected from Dr. Weeks, particularly full and interesting, and the whole work is carried out in a manner worthy of the high reputation of its author. There are, of course, in the book opinions with which one does not agree, and statements which one would like to modify, and omissions (such as the total ignoring of the important subject of blepharocheile-plasty) which one would much like to correct. Still one cannot but feel that it is a most worthy monument of the industry and ability of its distinguished author, and that whatever slight defects it contains can easily be corrected in the next edition.

It is written in most excellent and readable English, and bears favourable comparison, in this regard, with many of the medical works of his fellow-countrymen.

The publishers have done their part very well, and the illustrations are both numerous and informing. On the whole, therefore, we have nothing but appreciation for this latest addition to the ophthalmological library.

Auto-Inoculation in Pulmonary Tuberculosis. By Marcus Patterson, M.B., B.S., M.R.C.S., L.R.C.P., Medical Superintendent at Brompton Hospital Sanatorium, Frimley; Late Resident Medical Officer and House Physician at Brompton Hospital. London: James Nisbet & Co., Ltd. 1911. Pp. 236, with Illustrations.

Any one who has visited the Brompton Hospital Sanatorium at Frimley must have been struck by the evidences of the personality of the Medical Superintendent in the methods of administration and treatment adopted in that institution.

We have had a general knowledge of Dr. Patterson's work for some time, but until now we have waited for a detailed exposition of the theory and practice carried out at Frimley. A study of the handsome volume before us increases our admiration for the thoroughness with which the author deals with his work, as well as for the enthusiasm which seems to overcome all difficulties and which he appears to infuse into his patients.

In Dr. Patterson's opinion too much stress has been laid hitherto on the local condition in pulmonary consumption as evidenced by stethoscopic examination, and not nearly sufficient attention has been given to the state of the blood and the general health of the patient.

In diphtheria we do not base our prognosis on the local condition of the throat alone: we consider also the extent to which the condition of the blood fluid is affected by bacterial products. The membrane may asphyxiate the patient mechanically, just as the local condition of the lung in phthisis may cause death by hæmoptysis, but generally the recovery or death of the patient depends on the bacterial products which are generated locally and discharged into the blood stream.

The question of "balance" is the important factor—that is, "the ratio between the violence of the invading micro-organism and the specific resisting power of the body to that particular organism." Raise the level of resistance and the bacterial products will become less violent. Thus physical signs are untrustworthy guides to prognosis, and sounder information regarding the patients progress can be gathered by watching the effects of the bacterial products on the general condition as shown by—(1) the temperature, (2) the appearance and quantity of the sputum, (3) the patient's own feelings, (4) the appetite, and (5) the weight; while the physician's objects in treatment are—(1) to raise the patient to his normal or highest known weight, (2) to raise the patient's specific resisting power to such a degree that he can perform the hardest work without introducing a dose of bacterial products into the blood large enough to produce constitutional disturbance, and (3) to stop or greatly diminish the discharge of sputum. Dr. Patterson lays great stress on the prognostic value of the increase or decrease in the amount of sputum.

A patient with an excessive quantity of bacterial products in his blood will have fever, and until the dose—that is, the "auto-inoculation"—can be controlled, the fever will remain.

The treatment of consumption does not begin and end with fresh-air, which has no specific property which can affect

bacterial action in the blood. It is necessary to control excessive doses of bacterial products and co-operate with Nature in counteracting the toxins of the bacilli. This forms the basis of Dr. Patterson's scheme of graduated rest and graduated exercise, by means of which he claims that the patient's resistance to the bacterial products is raised, while at the same time he is restored to working capacity. When an inoculation exceeds the capacity of the protective substances to deal with it, the patient suffers from toxæmia, the extent of the auto-inoculation depends in a large measure upon the activity of the lungs.

To restore the patient's temperature is the object of treatment, and Dr. Patterson states that this is most readily accomplished by enforcing "complete immobilisation," whereby the mobility of the lungs is diminished and the dissemination of bacterial products into the blood-stream appreciably lessened. Patients who have a temperature as low as 99° F., and constitutional symptoms, are sent not only to bed, but are treated, except as to diet, like a patient suffering from typhoid fever. They are not allowed to move in bed, to read, to wash themselves, or to go to the lavatory. They are enjoined to talk as little as possible, unnecessary coughing is controlled as far as possible, and stethoscopic examination is avoided. Visitors are barred and letters censored. In the carrying out of the scheme we see the advantages of a strong personality such as Dr. Patterson's. If a patient has been in bed with fever for a month or more they are kept on complete immobilisation for from six to ten days after the temperature has returned to and remained at the normal level. Then follow three days in which he is propped up in bed and allowed to read, and thence forward, if the temperature continued normal, greater latitude is allowed until he is able to be up all day fully dressed. If complete immobilisation has been tried for a period of three weeks or a month without effecting appreciable improvement, Dr. Patterson suggests, as a supplemental method, the use of tuberculin—preferably from the patient's own strain of bacilli. In this regard he states that he has had little experience in the use of tuberculin, and he says nothing on the question of "mixed infection," which

seems to play an important part in cases of the class with which he is here dealing.

The series of temperature charts showing the effects of complete immobilisation are of extreme interest and bear out the author's contention that the control of auto-inoculation is much more speedily and satisfactorily attained when the rest is absolute, or nearly so, than it is when the patient is kept in bed under the conditions so generally practised.

When excessive auto-inoculations have to be got under control the next step is to raise the patient's resisting power by stirring up his bacterial products and supplying increasing doses to his blood-stream. Hence is evolved the system of graduated labour, divided into six grades, varying from walking half-a-mile to six miles a day (1st grade), to using a large shovel and pick, heavy navvy work, &c. (5th and 6th grades), under efficient supervision, with stated hours of work and rest. In the case of women, scrubbing and other work takes the place of the navvy work done by men. If during the course of graduated labour the patient gets an excessive auto-inoculation, as evidenced by a temperature of 99° F. or over, with constitutional symptoms, he returns to complete immobilisation, and the temperature usually falls to normal within three days at most. When it has been normal for at least twenty-four hours he is allowed to wash himself. At the termination of another twenty-four hours, if all is well, he is allowed to go to the lavatory and be up for half an hour. If conditions continue satisfactory he is allowed up for half the next day and for the whole of the day after. He is next put to walk six miles a day (if he had previously being doing graded labour), and if this is successfully accomplished he goes back to the grade in which he was formerly working. In other words, "he has acquired immunity on that grade," and pursues his way to the termination of the course.

Such is the Frimley method of treatment—work scientifically graded and carefully controlled is the keynote of the system. The effect on the patients is remarkable in its physical and psychological aspects. When they leave the institution they do so with hardened muscles, constitutionally "fit" for the struggle of life, and in this they contrast most favourably

with the work-shy neurotics, mentally and physically deteriorated by indolence, who are produced in so many sanatoriums. These latter we have met with, and they have brought sanatorium treatment into disrepute.

Dr. Patterson's chapters on Diet and on Sanatorium Administration well repay study. They abound in practical hints, and are the product of ripe experience and keen insight. Altogether this is a helpful and stimulating book, and we commend it to all who have the charge of consumptive patients in the early stages of the disease. It must be remembered in reading the book that the patients at Frimley are in general the selected cases from the great number who come under treatment at Brompton, but this in no way detracts from the value of the work or of the system described.

The publishers deserve a word of praise for the way in which they have produced this beautiful volume. The paper and the printing are good and the illustrations are excellent.

The Errors of Accommodation and Refraction of the Eye and their Treatment. A Handbook for Students. By Ernest Clarke, F.R.C.S. Third Edition. Cr. 8vo. Pp. ix + 229. With 88 Illustrations, Test Type, and Coloured Plates. London: Baillière, Tindall & Cox. 1911.

This is the third edition of this excellent handbook, in which, without labouring the more difficult and scientific problems of the subject, is given as much as "the busy practitioner or overburdened student" will find necessary. The author rightly devotes a considerable amount of space to "Eye Strain."

It is not necessary, as this is not our first review of this manual, to enter further into details, but simply to endorse our former favourable criticism.

The Disorders of Post-Natal Growth and Development. By Hastings Gilford, F.R.C.S. Pp. 702. Adlard & Son. 1911.

The pathological problems which we may meet and which we have to solve may be attacked in various ways. In recent

years the changes in structure, or the influence of chemical substances called toxins, whether of external or internal origin, have held prime place in our thoughts.

The book before us is an attempt to place the subject in a somewhat different aspect. The keynote appears to be that of clinical observation of the changes which have taken place during development. The author thinks that the diseases of post-natal growth and development must harmonise with the common laws of life. He begins with the assumption that they not only have their foundation in biological events, but are themselves of the same order.

The most obvious and certain change which can take place in anything is that it grows older. Various conditions may alter the rate of the changes which an organ undergoes with age, either in the way of retarding or accelerating them. If these be retarded we have prolonged youth or "infantilism," while if accelerated we have premature old age or "senility."

The individual can be considered from three points—that of the single cell, groups of cells or organs, and the group of organs constituting the whole body, and as one or more of these sections may be in a condition of infantilism or senility, thus very various pathological changes may be produced.

The following few lines will give the author's views on this:—

"Thus, if a few cells grow to excess, forming the progressive variation we term an innocent growth, we have a very different disease from the similar variation of an organ, such as the thyroid gland in Graves's disease, or of the spleen, or liver when it undergoes simple numerical hyperplasia; and this overgrowth of organs differs again in its results from that overgrowth of whole individual which constitutes simple gigantism."

"Still greater difference is to be observed when the variation is one of development. Thus, when a few cells sink into old age while the cells round them are still young, the product of their prematurity is a cancer, but when an organ falls into a similar state of dotage the result, though equally disastrous so far as function is concerned, presents many points of difference. It gives rise to a condition which, if it occur in the liver, we term 'cirrhosis,' in the kidney 'Bright's disease,'

in the thyroid gland 'fibrous goître,' and so on; but a similar old age distributed more or less evenly over the whole body presents itself very differently from the senility of the cell and of the organ. Indeed, it requires some effort to recognise that acromegaly is the same process affecting the whole individual as that which gives rise to cirrhosis when it occurs in the liver, and cancer when it occurs among cells." Indeed it does!

Is a "cancer" cell a "senile" cell? This hypothesis may or may not be true, but will require much more proof than can be found in this book before it can supplant the general teaching of the present day.

Elsewhere we find the following:—"This is what happens when cells become cancers. They reverse their development (become prematurely senile), and, like all embryonic cells, multiply prodigiously, pushing their way along the paths of least resistance, and so wander *viâ* the open channels of the lymphatics into other parts of the body."

This curious mixture of fancy and fact may be fitted to some cases, but will not explain very many of those which one meets in practice.

A smaller number of pathological conditions are explained by reversions to the conditions which obtained amongst our ancestors. These are more commonly accepted doctrines, although the claim of Simian characters in acromegaly, because the coarse facial appearance had some resemblance to the anthropoid apes seems pushing the doctrine very far. It is but fair to note in this connection that reversion is not mentioned as a cause for elephantiasis, although "the real origin of the condition, nevertheless, consists in all cases of some 'predisposition' or variation."

In the chapter on the Post-Natal Disorders of Sex a large collection of cases of giants and dwarfs and over and under development of other varieties are brought together. This might be of use in the classification of some unusual cases sometimes met in practice.

The book is very well brought out, and affords a considerable amount of interesting matter in a new light, particularly for those in clinical practice, and to whom it may be recommended for occasional consultation.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—Sir Charles Ball, M.D., F.R.C.S.I.
General Secretary—J. A. Scott, M.D., F.R.C.S.I.

SECTION OF OBSTETRICS.

President—H. Jellett, M.D., F.R.C.P.I.
Sectional Secretary—G. FitzGibbon, M.D., F.R.C.P.I.

Friday, March 24, 1911.

The President in the Chair.

Malignant Ovaries.

Dr. Tweedy showed malignant ovaries which developed in an elderly unmarried woman. Her symptoms were those of hysteria. She was seen by several doctors, who noticed a lump in the abdomen which was considered to be a myoma. Operation was considered inadvisable. When he (the speaker) examined the case he found the woman suffering from constipation, weakness, and loss of flesh. The tumour was very palpable, hard, and nodular, precisely like a myoma, but taking into consideration that it was doing the patient harm, and had been noticed only within the last six months, he had no hesitation in calling it a malignant tumour. When he opened the abdomen he found two tumours growing, one on either side of the uterus; the latter was small and adherent. The tumours had all the appearance of primary carcinoma. One tumour was lying almost detached, and was fixed in Douglas's *cul-de-sac* in

close communication with the ovary. It seemed to have been detached from the ovarian tumour, and had made extensive adhesions to the rectum. He removed it in its entirety, together with two inches of the upper portion of the rectum. He then started to stitch up this rectal incision, and, having closed it, he found she had scybalous masses in the bowel. His house-surgeon, in removing these masses, had gone through the rectum. This accident he (the speaker) believes is much commoner than is supposed. His house-surgeon did not think he was using any force. The bowel was stitched up one and a half inches from the anus, and iodoform gauze packed around the infected area. He put in a tube to encourage discharge, which came away copiously for two or three days. She did uncommonly well, and he did not like to remove the plug, but kept it in for seven days, and fed her on albumen water, one and a half pints daily, and at the end of five days added half a pint of whey. On the day after taking out the plug a fæcal fistula formed. The bowels were then opened. The fæcal fistula has now nearly dried up, and her temperature and pulse are normal.

Sir Wm. Smyly said some years ago he was called in consultation to a woman upon whom a doctor had tried to separate adhesions by Schultz's method. Two fingers went through the rectum, and the woman died of peritonitis. At that time gloves were not in vogue. He (the speaker) thought gloved fingers were much more unlikely to go through the bowel. In a tubercular rectum the fingers will go through with great ease. He operated on a case of tubercular tubes. On passing his fingers into Douglas's pouch to separate adhesions he found he had gone through the rectum unconsciously. He stitched up the wound, and four weeks later fæces came away through the abdominal wound.

Dr. Crofton said the tumour was of a very malignant nature, the cells were in a tremendously active state of division, and hetero-mitoses were very well marked.

The President asked why the gauze had been left in for seven days.

Dr. Tweedy said if the gauze is taken out within twenty-four hours or forty-eight hours great difficulty will be found in its removal. After four or five days it is an easy matter

to pull it out. Theoretically, adhesions are supposed to form around the gauze in forty-eight hours, but this is only partially true, and in many cases adhesions form around the gauze only at the end of three days or longer.

A Case of Natural Delivery after Cæsarean Section.

Dr. Solomons read a paper in which he commented on the dread which beset most obstetricians of allowing a woman with a cicatrix in her uterus to deliver herself. The baby born by Cæsarean section weighed 7lbs., the one born naturally 6½ lbs. The true conjugate after measuring at the birth of the first two babies was 7 c.m. Transverse diameter of inlet 10 c.m.; at the birth of the third the conjugata vera was 8 c.m., transverse 12.5 c.m. Myomectomy was cited as an instance of the safety of allowing a woman with a uterine cicatrix to deliver herself. Sterilisation of the patient should never be performed.

Dr. Holmes said there must have been some disparity in the measurements considering there seemed to have been an increase of 1 cm. in the conjugata vera and 2 cms. in the transverse diameter. With regard to the weight of the children, the child born by Cæsarean section weighed 7 lbs., whilst the other weighed 6½ lbs. He thought the size of the child's head must be taken into consideration.

Dr. Tweedy said he did not think the pelvis had enlarged between the two births. The pelvis must have been wrongly measured the first time, as it is easy for those without much practice to go wrong in the use of Skutsch's pelvimeter. He considered it an extremely rash thing to have allowed the woman to deliver herself considering that the uterus was adherent to the scar, and the woman gave a history of a sinus for three years after the Cæsarean section.

Dr. Gibbon FitzGibbon asked, considering the child was 6½ lbs., was there any indication of its being premature. The fact of this woman having delivered herself naturally was not a point against sterilisation, and he thought that when a woman had to undergo a second Cæsarean section the question of sterilisation should be decided by the wishes of the patient, particularly when the children were living.

The President said he did not see why the uterus should rupture during labour if it was adherent to the back of the abdominal scar. An attempt was made to encourage

the formation of such adhesions with the object of protecting against a possible peritoneal infection, and a considerable number of patients must have come into labour, because after all the practice of performing Cæsarean section before the patient had been some time in labour was one of quite modern growth. This practice he considered to be very good. If the uterine scar ruptures during labour, it would be immediately diagnosticated, and would not be a serious matter. In regard to sterilisation, one must take into consideration the number of children the patient had. He would be inclined to carry out her wishes if she had children before. It is a recognised treatment to perform division of the tubes in cases in which the patient has had recurrent renal disease during pregnancy, and where there is a possibility of her having it again during the next pregnancy.

Dr. Solomons did not think the pelvis was wrongly measured considering that the measurements carried out in the Rotunda and Holles Street were found to correspond. The woman had been before the Academy of Medicine before, and no mention was made about a sinus or suppuration, and he did not attach much importance to her statement. As regards the maturity of the child, both its appearance and the history showed that she was up to her full term. He did not see why a uterine scar should prevent a patient continuing her labour. As regards sterilisation of the patient, he quoted Karl Hartmann's statistics, which showed that there was less danger in performing subsequent Cæsarean sections than in doing it the first time. This seemed to be a strong argument against sterilising the patient.

Notes on Two Cases of Clinical Interest.

Dr. Jellett read notes of two cases of interest. The first case was one of perforative appendicitis complicating pregnancy and labour. The second was one of eclampsia in which death occurred from rupture of an abdominal vein.

Dr. Tweedy said he was quite aware that certain people got apoplectic seizures even if they had not got fits. Hæmorrhages into the brain are common in epileptic attacks. When he stated on a previous occasion that no woman should die in eclamptic fits he meant that a woman should not die of the fit itself. He said if septic micro-

organisms were found in the liquor amnii before labour, the woman should be delivered by Cæsarean section and the uterus removed. This case went to prove that this treatment was the correct one. He thought that the presence of micro-organisms in the uterus was a clear indication of adhesions with the intestine or of some suppurating focus in the abdominal cavity.

Dr. Crofton said if the vaccine was mixed with 10 to 20 cc. of anti-streptococcus serum the streptococci are more or less sensitised, more easily taken up, and produce more "anti" substances with much less risk to the patient. The "antigenic" effect of the vaccine is not affected, and the mixture produces active as well as passive immunity. He thought before doing the operation of total extirpation of the uterus one should first try specific therapy.

Dr. Rowlette said he did not think the vaccine had anything to do with the patient's death, as the dose given was very small. He doubted whether the putrefactive organisms were the most important, for saprophytic organisms were also found. Her abdomen was full of putrefactive fluid. He had not tried mixing the vaccine with the anti-serum, but he had given them side by side with no better result, but with an attack of neuritis in one case which was not serious. He did not consider that any vaccine treatment would have been of use in this case. With regard to the eclamptic case, although there were the typical changes of eclampsia, it was impossible to find where the hæmorrhage came from, but it seemed to be from a branch of the inferior mesenteric vein.

Sir Wm. Smyly said that the second case had died from perforation of the appendix, and the only chance of saving her life would have been to have opened the abdomen and to have removed the appendix. An exact diagnosis could not have been made.

The President considered it too wide a statement that if bacteria are found in the liquor amnii a hysterectomy should be done. There was one point in this case in favour of this, for if this had been done one would have seen the perforated appendix. It was an analogy of sarcoma of the uterus in which there is pus inside, or myoma of the uterine cavity with an acute infection. He thought if one removed the myoma or the pus he should endeavour to treat the local

uterine condition, and if this condition is a local one and there is no evidence of its spreading to the peritoneal cavity, he thought that the treatment in the first instance would be the local treatment of the infected uterine cavity from the vagina. The reason he said the epithelium of the chorionic layer protected the child was because there was no obvious evidence of fœtal infection, and the epithelial layers of the chorion were found intact only at the placental site.

SECTION OF PATHOLOGY.

President—A. H. Benson, M.B., F.R.C.S.I.
Sectional Secretary—W. Boxwell, M.B., F.R.C.P.I.

Friday, March 31, 1911.

The President in the Chair.

Splenic Anæmia.

Drs. F. C. Purser and H. C. Earl gave an account of a man, aged thirty-four, who had been under the care of Dr. J. F. O'Carroll in the Whitworth Hospital suffering from the group of symptoms described under the splenic anæmias. The enlarged spleen had been noted by the patient in January, 1910, after an attack of influenza. This and scarlatina when very young were the sum of previous illnesses. No venereal disease. The patient was married. He had three healthy children. He was a stationmaster, and had never been out of Ireland. Father, three brothers, and two sisters alive and healthy. Mother died, aged sixty-two; cause of death unknown. On admission to hospital on November 16, the lower edge of the spleen could be felt one inch below the umbilicus. The liver was palpable, but not greatly enlarged; no jaundice, no ascites. Hæmorrhage from the rectum had been noted about ten times in eight months; no bleeding from other sources. A blood examination showed—Red corpuscles, 2,480,000, no abnormality in size, shape, or staining; hb. 55 per cent.; white corpuscles, only 2,000 per c.mm. A differential count showed two mononuclear cells to each polynuclear cell. Shortly after

admission (November 30th) patient developed an ischio-rectal abscess, which discharged into the gut. The red corpuscles had now fallen to 1,264,000 per c.mm., and the hæmoglobin to 25 per cent.; the white corpuscles numbered 3,600; differential count as before. January 5, 1911.—The patient was nearly cured of the abscess. The red corpuscles had risen to 2,930,000, and the white corpuscles to 4,400 per c.mm.; polynuclear neutrophile, 24; polynuclear eosinophile, 2; transitional, 2; hyaline, 6; large lymphocytes, 30; small lymphocytes, 36; one normoblast was found. The patient vomited "coffee-grounds" on January 8, and had a convulsive seizure on January 9. The fit was more like a toxic than an apoplectic seizure. At no time was anything found wrong with the urine. The patient never recovered consciousness. He died on January 11.

Autopsy.—Spleen, 2,380 gm., hard and firm, red in colour, with darker red blotches all over its cut surface. Capsule thickened; no very obvious fibrosis of organ to naked eye. Microscopically considerable fibrosis, extensive disappearance of Malphigian bodies, and areas in pulp of red blood corpuscles closely packed. Liver, 2,050 gm., looked fatty; microscopically showed some little interlobular cirrhosis. A few vascular and rather fibrous lymphatic glands were found round the abdominal aorta and head of the pancreas. Heart flabby, auriculo-ventricular valves each admitted one finger more than usual. Lungs very emphysematous: Brain, kidneys, and other viscera normal.

Blood and Organs from a Case of Pernicious Anæmia.

Professor A. H. White showed some of the organs and some stained specimens of the blood from a case of pernicious anæmia. The case was in every way a typical one, and the organs showed the characteristic fatty degeneration. The spleen was a little enlarged, and somewhat indurated. In slices from the liver and the kidney the presence of hæmosiderin in exceptional amount was demonstrated by both the ferrocyanide and ammonium hydrosulphide methods. A point of interest in this case was clear evidence of healed tuberculosis, found in the apex of one lung and in the liver. Professor White pointed out that patients not uncommonly developed tuberculosis in the course of the disease.

Dr. Wm. Boxwell said that this patient had been twice

"cured" of her ailment by the administration of cacodylate of sodium. When first admitted to hospital, exactly a year before, she was almost "*in extremis.*" The red cells had fallen to 17 per cent., the hæmoglobin to 20 per cent. The blood was full of nucleated red cells, and occasional myelocytes could be found. Her teeth were carious, and the lower incisors entirely stripped of their enamel. Cultures had been made from the dentine, and compared with many taken from the teeth of various other patients, but nothing exceptional was found. After a three months' course of arsenic she made an apparent and wonderful recovery. The red cells count rose to 60 per cent., and the nucleated cells disappeared. The poikilocytic character of the blood, however, persisted, and the index was always a little above one.

Dr. T. G. Moorhead said that nucleated red cells were not the most important characteristic of the pernicious anæmia blood picture, but rather the poikilocytosis and the great variations in the size of the corpuscles. He had seen cases of pernicious anæmia otherwise typical, but in whose blood nucleated red cells could never be found.

Dr. Boxwell said he always looked upon this very variation in size of otherwise well-shaped cells as *the* essential feature of pernicious poikilocytosis. Broken and distorted cells might be simulated by artefacts. As regards the absence of nucleated red cells, Lazarus Barlow stated that in the majority of cases nucleated cells were generally conspicuous by their absence. This confirmed Dr. Moorhead's experience and to some extent his own.

Dr. H. C. Earl asked if it were not merely a question of looking long enough for them.

Professor White agreed that the great variation in size was a constant change in pernicious anæmia, as well as the change in shape. He thought that nucleated red cells were always present in the blood at some stage of the disease. He mentioned a case from whose blood films were made showing multitudes of nucleated red cells; while in films taken a few days later not one such cell could be found.

An Unusual Case of Tuberculosis.

Professor J. A. Scott, in demonstrating a remarkable case of tuberculosis, said the man was in hospital for some time. He was known to have a large spleen and disease of

the kidneys. He subsequently died. The *post-mortem* examination showed a large spleen, which weighed 4½ lbs., and was covered with whitish patches about one-quarter inch in diameter. The liver was slightly pale, and showed small light-coloured spots, which were rather hard to see. The lungs were slightly pneumonic. The case subsequently proved to be a case of tuberculosis. The heart showed patches of fibrous tissue in the wall of the left ventricle. The aorta had a fibrous mass growing from the edge of a patch of atheroma. The microscopical examination of the liver proved the nature of the disease. The small spots were minute miliary tubercles, showing granuloma and giant cells. The spleen showed granuloma and giant cells, but much more fibrous tissue and caseation. The lungs showed tubercular patches and catarrhal pneumonia. The kidneys contained similar miliary tubercles. The disease appears to have commenced in the spleen, from which it was diffused through the whole body.

Dr. Gunn said the man was ill three weeks before he came into hospital, when he had extreme tenderness over the spleen and high fever. It was thought he had a subphrenic abscess, but after he had been a few days in hospital they were satisfied it was an enlarged spleen.

Dr. Moorhead said that chronic tuberculosis of the spleen was not so rare as was commonly thought. There was a form of chronic tuberculosis associated with enlarged tubercular spleen, and resembling Hodgkins' disease, that was far from rare. Often the only clue to diagnosis in such a case, apart from excising a gland, lay in enumerating the white cells of the blood. In the tuberculous condition to which he referred the lymphocytes were usually much diminished.

(*a*) *Cerebral Hæmorrhage in a Child.* (*b*) *Tuberculosis of the Heart Causing Sudden Death in a Child.*

Dr. W. G. Harvey showed the brain of a girl, aged thirteen. She had always been strong and healthy. Her sister had died from a sudden stroke when she was young. One day the mother noticed that she could not raise her right arm or leg, and the right side of the face was paralysed. The following day she died. At the *post-mortem* examination, when the cranial cavity was opened,

the left cerebral hemisphere was observed to bulge, and there was also a subarachnoid hæmorrhage. There was no fracture of the vault or base of the skull. On cutting into the brain a large hæmorrhage appeared in its substance immediately behind the Rolandic fissure. Section of the brain near the hæmorrhage showed no tumour substance. The other organs were normal. The interest in the case was (1) in hæmorrhage of the brain not due to tumour occurring in so young a child; (2) in the history of a similar "stroke" in a young sister.

Dr. Harvey's second case was that of a child, aged eight, who was brought into hospital with the history that she was perfectly healthy since October last, when she had seen a doctor for some apparently trivial complaint. On the day that she died she went to bed apparently quite well, and her father noticed she was breathing curiously in her sleep. He tried to awaken her, but failed, and brought her over to hospital, where she was found to be dead. On *post-mortem* examination large quantities of fluid were found in the pleural and pericardial cavities. The lungs on section showed some bronchitis. A few adhesions were present on both sides, and some miliary tubercles. There was no pericarditis, but very extensive degeneration of almost the entire heart muscle. The degenerated areas were pale in colour, and to the naked eye were not unlike patches of fibroid degeneration. On section they showed the typical appearances of tuberculosis. The valves were normal.

Dr. Harvey said that such extensive tuberculosis of the heart-muscle was very uncommon.

Aneurysm Perforating the Œsophagus.

Dr. Robert J. Rowlette showed a specimen of aneurysm of the aorta perforating the œsophagus. He said that the patient came into hospital having vomited a large quantity of blood. He was three days in hospital, during which time he had two severe attacks of hæmatemesis, one of which ended his life. The history was that for some months he had increasing difficulty in swallowing, together with general wasting. The pain felt on swallowing was referred to the right side of the sternum in front, no pain being felt elsewhere. No physical signs of tumour in the thorax had been discovered. At the time he had regarded the case as

probably malignant disease of the œsophagus. At the *post-mortem* examination he found the descending part of the arch of the aorta had a saccular aneurysm eroding the vertebral column. There was an opening into the œsophagus large enough to admit the end of one finger. In this opening was some soft blood-clot. An interesting point was that there was no pain referred to the back or to the left, although it was on the left side that the vertebral column was eroded.

Heart and Aorta from a Case of Sudden Death.

Dr. Boxwell showed the heart and part of the aorta taken from a case of sudden death. The man from whom the specimens were taken was a powerfully-built man of the plethoric type. The only history obtainable was that he was suddenly seized with a "fit of shivering" while standing with some friends in a publichouse, and in a few seconds dropped dead. At the *post-mortem* examination an aneurysmal dilatation was found at the root of the aorta which was atheromatous. There was also some acute aortitis noticeable, as many of the patches were covered by red fleshy vegetations, and there were small hæmorrhages distributed through the coats of the vessel, and in the surrounding cellular tissue. In the upper part of the right ventricular wall there was a large irregular fibrous mass, yellowish grey in colour, terminating in a smooth, circular elevation the size of a sixpence, and containing some liquid blood. The mass proved to be inflammatory, probably gummatous, and giant cells were plentiful. Parts of it might have passed for typical tuberculous granulation tissue. In a section from one of the aortic vegetations Gram positive diplococci were found.

Section of a Bronchial Cast with Charcot-Leyden Crystals.

Dr. T. T. O'Farrell showed a microscopic preparation of a bronchial cast. It was seen to be packed with Charcot-Leyden crystals.

SECTION OF STATE MEDICINE.

President—E. J. McWeeney, M.D., F.R.C.P.I.
Sectional Secretary—W. A. Winter, M.D., F.R.C.P.I.

Friday, April 7, 1911.

On the Rôle of Carrier Cases in the Propagation of Infectious Disease and more especially of Typhoid Fever.

The President read a paper entitled as above. He began by dividing germ-carriers into two classes—viz., those who, having had the disease and recovered from it, nevertheless continue to excrete the specific germ for indefinite periods. These are the carrier "cases." There is also a type of carrier who has never had the disease—at any rate not in recognisable form—but has been in relation, direct or indirect, with cases. Such persons are best termed "infectious contacts." He then reviewed the *rôle* of each class of germ-carrier in the propagation of Asiatic cholera, cerebro-spinal fever, diphtheria, dysentery, and bubonic plague. Coming to the subject of typhoid, he sketched the development of our knowledge as the result of the pioneer work done in South-west Germany, and also by our own medical officers in India, more especially at Kasauli. Out of every hundred persons who contract typhoid, at least five continue to harbour the bacillus for periods exceeding three months after defervescence. A certain percentage of those who live in the same house as the declared cases, or who have the care of them, also come to harbour the bacillus. Of every four chronic carrier cases three are women. Of the "infectious contacts," a large proportion are children. The proportional frequency of typhoid-carrying and of gall-stones as between the two sexes is about the same—three females to one male. The majority of carriers excrete the bacillus with the fæcal matter; a minority in the urine. The source in the former case is the gall-bladder, in the latter, a typhoidal pyelitis or cysto-pyelitis. As regards treatment, success has been claimed for borovertin by Niepraschk and for salicylate of sodium by Hilgermann; but the experience of most observers, including his own, was unfavourable. Vaccines had likewise failed in most hands, and even operative procedures on the

gall-bladder had not succeeded in ridding carriers of their bacilli. Professor McWeeney then related in detail the case of a female urinary carrier, A. F., to whom some forty cases had been traced. He had had her under observation for over a year at the Mater Hospital in Dublin, and had tried urinary antiseptics and vaccine treatment in vain. After an operation whereby the kidney was exposed and fixed the bacilli disappeared, and the patient was discharged apparently cured. He concluded by mentioning other cases that had come under his notice, and pointed out that institutional typhoid was, in Ireland, very often propagated by carriers.

Major Morgan said that he had listened with the greatest interest to Professor McWeeney's paper, more especially as he was the officer in medical charge of the camp where the outbreak to which reference had been made had occurred. He said that the dairy in which the "carrier" whose case Professor McWeeney had detailed was employed was the recognised source of milk supply for the camp, and was frequently inspected, and always well kept. When first suspicion fell on the milk a "carrier" was suspected in the person of this girl, but the first sample of her blood examined gave a negative Widal reaction. There were two regiments encamped side by side, both getting their milk from this dairy. One of these regiments used boiled milk, with the exception of the man who did the boiling and reserved a portion unboiled for himself—he was the only one attacked: while in the other regiment, where the milk was not boiled, an outbreak occurred. Further samples of this girl's blood were taken, and were now found to give "positive" reaction, and endeavours were made to obtain samples of her urine and fæces for bacteriological analysis, but with not much success; but as she was the only person who had to do with the milk at O'N.'s farm he thought it was certain that she was undoubtedly the cause of the outbreak, and would be found to be a "carrier," as was subsequently proved to be the case by the researches carried out by Professor McWeeney. The speaker went on to refer to the investigations carried out by Major Harvey and himself in India on the viability of the *Bacillus typhosus* as excreted under natural conditions, which showed that the excretion of the bacillus in both urine and fæces was often extremely intermittent, and might easily be overlooked. When

passed under natural conditions into water it rapidly disappeared, but was recovered from artificially infected dry earth up to three or four days, showing how easily it would be disseminated in dust. The bacillus was recovered from the fæces up to ten days, showing how easy it would be for the fly to carry infection from the dejecta of a typhoid carrier. As regards treatment, one of these carriers had been given 10 grains of urotropin three times a day until 450 grains had been given, and the drug did not seem to have the slightest effect upon the condition.

Dr. D. Farnan said he cystoscoped the girl A. F. on two occasions. On the first occasion he found that the excretion of methylene blue was delayed on both sides. Under these circumstances he did not feel justified in exploring either kidney. Later on he again cystoscoped, and used 2 cc. of .4 per cent. of indigo carmine, and found that the excretion of the left kidney was normal. While observation lasted (one hour) no blue urine appeared from the orifice of the right ureter. This, coupled with the fact that the right kidney was movable and that paroxysms of pain and elevation of temperature were associated with diminution of the pus and bacilli in the urine, led him to conclude that there was not sufficient drainage to the pelvis of the right kidney. So he suggested he might fix it, as it was situated in the right iliac fossa. He operated, explored, and found the kidney displaced and surrounded by dense adhesions. Nothing was discovered in the ureter or pelvis of the kidney, the mucous membrane being quite normal. He would suggest that the surgeon should be given an opportunity of draining the gall-bladder in the case of these typhoid carriers in which bacilli were found in the fæces, and endeavour to find out what could be done for these cases, otherwise so resistant to treatment.

Dr. Mervyn Crofton said with regard to the prophylaxis of these carriers, especially following typhoid fever, if they were treated by vaccines the patient would not recover with a low agglutinative power, and, therefore, there would be much less chance of their being carriers. He said that it was necessary both to raise the patient's immunity, and to secure that these immune substances should get to the lesion. He had given Professor McWeeney's patient two thousand millions and found that the agglutination was at least 1-500, and the

patient was still excreting a large number of typhoid bacilli. He agreed it was no use to do more since she had the obvious lesion in her right kidney, and since indigo carmine was not excreted from her right ureter. Whether the vaccine had anything to do with the cure it was impossible to say, but it is possible that when the kidney was fixed into its place, and a good blood supply renewed the kidney had got a good supply of these antibodies and that this contributed to the sudden disappearance of the bacilli from the urine.

Dr. O'Kelly wanted to know the expense of carrying out the procedures mentioned by the President as being carried out in Germany, where the population was many times greater than in Ireland.

Dr. Kirkpatrick said he would like to know how the President would proceed to investigate the cases of diphtheria in the schools. He thought it would be fraught with considerable difficulty where children are not suffering from any disease in their upper air passages. He agreed that much of the sickness in children which is termed gastric is probably enteric fever. He said the cause that the right kidney was more often affected than the left was probably due to infection from the colon. It occurred to him that in this case probably the right ureter was kinked owing to displacement of the kidney, and in this back-water the typhoid bacilli were able to grow, and when the kidney was fixed the bacilli were excreted.

Professor McWeeney said he was interested to know from Major Morgan that at first this typhoid carrier gave a negative Widal, because while she was under his observation the reaction was always positive, more especially against the ordinary laboratory cultures. A peculiarity about the bacillus was that it was not very motile, and not readily agglutinated when freshly isolated. He supposed there must have been some pouch in the pelvis of the right kidney where the bacilli had collected. Vaccine therapy did not prove successful, and Houston, of Belfast, is the only one who got good results. The cost of carrying out the procedures is much less in Germany than it would be in Ireland.

SANITARY AND METEOROLOGICAL NOTES.

Vital Statistics

For four weeks ending Saturday, September 9, 1911.

IRELAND.

The average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended September 9, 1911, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 22.1 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,149,495. The deaths registered in each of the four weeks ended Saturday, September 9, and during the whole of that period in the several districts, alphabetically arranged, correspond to the following annual rates per 1,000. In some cases, owing to deaths not having been registered within the week in which they occurred, the rates do not fairly represent the weekly mortality :—

Towns, &c.	Week ending				Average Rate for 4 weeks	Towns, &c.	Week ending				Average Rate for 4 weeks
	Aug. 19	Aug. 26	Sept. 2	Sept. 9			Aug. 19	Aug. 26	Sept. 2	Sept. 9	
22 Town Districts	19.4	19.3	21.0	22.1	20.4	Lisburn	12.9	17.1	12.9	25.7	17.2
Armagh	—	13.7	6.9	27.5	12.0	Londonderry	16.6	14.1	12.8	16.6	15.0
Ballymena	36.7	13.8	22.9	27.5	25.2	Lurgan	—	8.6	12.9	8.6	7.5
Belfast	18.8	17.8	18.6	19.7	18.7	Newry	8.7	30.5	4.4	17.4	15.3
Clonmel	5.1	20.3	5.1	10.1	10.2	Newtownards	22.9	74.4	57.2	5.7	40.0
Cork	12.9	19.1	24.5	25.2	20.4	Portadown	17.8	35.6	22.2	26.7	25.6
Drogheda	4.2	4.2	4.2	4.2	4.2	Queenstown	19.8	26.4	26.4	13.2	21.4
Dublin (Reg. Area)	25.1	20.1	25.8	27.1	24.5	Sligo	4.7	42.0	4.7	14.0	16.4
Dundalk	15.9	19.9	7.9	7.9	12.9	Tralee	—	15.9	15.9	10.6	10.6
Galway	19.7	11.8	19.7	3.9	13.8	Waterford	22.8	13.3	9.5	26.6	18.1
Kilkenny	5.0	5.0	49.6	24.8	21.1	Wexford	22.8	18.2	22.8	31.9	23.9
Limerick	10.9	25.8	17.7	17.7	18.0						

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 22 districts during the week ended Saturday, September 9, 1911, were equal to an annual rate of 5.9 per 1,000, the rates varying from 0.0 in nine of the districts to 13.7 in Armagh ; the 4 deaths from all causes for that district including 2 from diarrhœa. Among the 146 deaths from all causes for Belfast are 2 from enteric fever, one from scarlet fever, one from whooping-cough, and 44 from diarrhœal diseases. Included in the 37 deaths from all causes for Cork are one from whooping-cough, and 8 from diarrhœa of children under 2 years of age. Two of the 13 deaths for Limerick are from diarrhœa in children under 2 years of age, and 3 of the 14 deaths for Waterford are from *enteritis* in children under 2 years of age. One of the 2 deaths for Dundalk is from diphtheria, and among the 6 deaths from all causes for Lisburn are 2 from diarrhœa in children under 2 years of age. Two of the 7 deaths for Wexford are from diarrhœa and *enteritis* in children under 2 years of age, and included in the 6 deaths from all causes for Portadown are 2 from *enteritis* in children under 2 years of age.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock, and Kingstown. The population of this area is 403,732, that of the City being 309,738, Rathmines 38,330, Pembroke 29,347, Blackrock 9,090, and Kingstown 17,227.

In the Dublin Registration Area the births registered during the week ended September 9 amounted to 212—115 boys and 97 girls—and the deaths to 219—106 males and 113 females.

DEATHS.

The registered deaths, omitting the deaths (numbering 9) of persons admitted into public institutions from localities outside the Area, represent an annual rate of mortality of 27.1 per 1,000 of the population. During the thirty-six weeks ending with Saturday, September 9, the death-rate averaged 21.6, and was 1.1 below the mean rate for the corresponding portions of the 10 years 1901–10.

The total deaths registered, numbering 219, represent an annual rate of 28.3 per 1,000. The annual death-rate for the past thirty-six weeks was 22.8 per 1,000, and the average annual

death-rate for the corresponding period of the past ten years was 23.7 per 1,000 of the mean population for all deaths registered.

Among the total deaths from all causes registered were one from scarlet fever, 4 from whooping-cough, 2 from diphtheria, 45 from diarrhœa and *enteritis* in children under 2 years, 14 from diarrhœa and *enteritis* in persons aged 2 years and upwards, and 2 from influenza. In the 3 preceding weeks, deaths from scarlet fever were 0, one, and 0; deaths from whooping-cough were 3, 6, and 7; deaths from diphtheria were one, 5, and one; deaths from diarrhœa and *enteritis* in children under 2 years of age were 49, 38, and 52 (declining to 45 in the week under notice) and deaths from influenza were 0, 0, and one, respectively.

There were 34 deaths from tuberculous disease, including 22 deaths from pulmonary tuberculosis, 5 deaths from abdominal tuberculosis, 2 deaths from tuberculosis of the vertebral column, 2 deaths from tuberculosis of joints, and 3 deaths from disseminated tuberculosis. In the three preceding weeks deaths from tuberculosis numbered 28, 19, and 32, respectively.

There was one death from broncho-pneumonia, and the deaths of 4 persons were attributed to *pneumonia* (type not distinguished).

Ten deaths were caused by cancer.

Convulsions caused the deaths of 3 infants.

Thirteen deaths were accounted for by organic diseases of the heart, and there were 11 deaths from bronchitis.

There were 2 deaths of infants from congenital malformations, 3 from prematurity, and 6 from congenital debility.

Of 4 deaths from accidental causes, one was caused by a tram accident, one by scalding of a child aged between 2 and 5 years, one by drowning, and one by suffocation of an infant in bed.

In 5 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases include the deaths of 2 children under 5 years of age (including one of an infant under one year old) and the death of one person aged 67 years.

Ninety-three of the persons whose deaths were registered during the week ended September 9 were under 5 years of age (64 being infants under one year, of whom 11 were under one month old) and 48 were aged 65 years and upwards, including 30 persons aged 70 and upwards. Among the last were 20 aged 75 years and upwards, of whom one (a female) was stated to have been aged 90 years.

The Registrar-General points out that the names of the cause

of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," and the "Tuberculosis Prevention (Ireland) Act, 1908," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; by Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; by Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; by the Executive Sanitary Officer for Kingstown Urban District; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended September 9, 1911, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Small-pox	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Pyrexia (origin uncertain) [a]	Enteric or Typhoid Fever	Erysipelas	Puerperal Fever	Whooping-cough	Cerebro-spinal Fever	Tubercular Phthisis (*Phthisis*)	Total
City of Dublin	Aug. 19	-	*	*	14	-	-	6	-	3	7	3	-	*	-	1	34
	Aug. 26	-	*	*	19	-	-	5	-	*	11	9	-	*	-	10	54
	Sept. 2	-	*	*	16	-	-	4	-	5	10	5	-	*	-	4	44
	Sept. 9	-	*	*	17	-	-	10	-	1	16	7	1	*	-	7	59
Rathmines and Rathgar Urban District	Aug. 19	-	*	*	*	-	-	-	-	*	*	-	-	*	*	*	-
	Aug. 26	-	*	*	*	-	-	-	-	*	*	*	-	*	*	*	-
	Sept. 2	-	*	*	1	-	-	-	-	-	-	-	-	*	*	*	1
	Sept. 9	-	*	*	-	-	-	3	-	-	2	-	-	*	*	*	5
Pembroke Urban District	Aug. 19	-	*	*	*	-	-	*	*	-	*	-	-	1	*	*	4
	Aug. 26	-	2	*	1	-	-	-	-	-	*	-	-	*	-	1	4
	Sept. 2	-	1	-	2	-	-	*	-	-	1	-	-	*	-	*	9
	Sept. 9	-	1	-	-	-	-	1	-	-	*	-	-	3	-	-	5
Blackrock Urban District	Aug. 19	-	*	*	*	-	-	*	*	-	1	*	-	*	-	*	1
	Aug. 26	-	*	*	*	-	-	-	-	-	*	*	-	*	-	*	-
	Sept. 2	-	*	*	2	-	-	*	*	-	-	-	-	*	-	*	2
	Sept. 9	-	*	*	-	-	-	-	*	-	*	*	-	*	-	*	-
Kingstown Urban District	Aug. 19	-	*	*	1	*	*	*	*	-	*	-	-	*	*	-	1
	Aug. 26	-	*	*	-	-	-	1	-	-	-	-	-	*	*	-	1
	Sept. 2	-	*	*	*	-	-	-	-	-	*	1	-	*	*	-	1
	Sept. 9	-	*	*	-	-	-	-	-	-	*	-	-	*	*	-	-
City of Belfast	Aug. 19	-	*	*	9	*	*	8	-	1	4	4	1	*	-	6	33
	Aug. 26	-	*	*	6	*	-	3	-	3	7	1	-	*	-	6	26
	Sept. 2	-	*	*	4	-	-	3	-	-	2	2	-	*	-	5	16
	Sept. 9	-	*	*	10	-	-	5	*	*	2	3	-	*	-	10	32

[a] Continued Fever.

Cases of Infectious Diseases under Treatment in Dublin Hospitals.

During the week ended September 9, 1911, 3 cases of measles were admitted to hospital, 7 cases were discharged, and 9 cases remained under treatment at the close of the week. In the 3 preceding weeks such cases had been 32, 21, and 13, respectively.

Twenty cases of scarlet fever were admitted to hospital, 14 were discharged, there was one death, and 81 cases remained under treatment at the close of the week, exclusive of 17 convalescents from the disease who were still under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the 3 preceding weeks the cases in hospital were 59, 68, and 76, respectively.

Two cases of typhus were discharged from hospital during the week.

Fourteen cases of diphtheria were admitted to hospital and 11 were discharged. The cases in hospital, which at the close of the 3 preceding weeks numbered 27, 24, and 30, respectively, were 33 at the close of the week.

Eighteen cases of enteric fever were admitted to hospital, 6 were discharged, and 60 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the 3 preceding weeks being 29, 32, and 48.

In addition to the above-named diseases, 4 cases of pneumonia were admitted to hospital, 2 were discharged, there were 2 deaths, and 9 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, September 9, in 77 large English towns, including London (in which the rate was 17.4), was equal to an average annual death-rate of 19.0 per 1,000 persons living. The average rate for 8 principal towns of Scotland was 16.4 per 1,000, the rate for Glasgow being 17.4, and for Edinburgh 12.2.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended September 9. From this Report it appears that of

a total of 62 cases notified, 26 were of scarlet fever, 22 of phthisis, 9 of diphtheria, and 5 of erysipelas. Among the 303 cases of infectious diseases in hospital at the close of the week were 127 cases of scarlet fever, 61 of diphtheria, 55 of phthisis, 31 of whooping-cough, 11 of measles, 8 of erysipelas, and 5 of chicken-pox.

METEOROLOGY.

Abstract of Observations made in the City of Dublin, Lat. 53° 20′ N., Long. 6° 15′ W., for the Month of August, 1911.

Mean Height of Barometer,	29.944 inches.
Maximal Height of Barometer (10th, at 9 a.m.),	30.263 ,,
Minimal Height of Barometer (24th, at 9 a.m.).	29.515 ,,
Mean Dry-bulb Temperature,	62.0°.
Mean Wet-bulb Temperature,	58.7°.
Mean Dew-point Temperature,	55.9°.
Mean Elastic Force (Tension) of Aqueous Vapour.	.447 inch.
Mean Humidity,	81.2 per cent.
Highest Temperature in Shade (on 17th),	78.1°.
Lowest Temperature in Shade (on 30th),	50.9°.
Lowest Temperature on Grass (Radiation) (30th).	46.8°.
Mean Amount of Cloud,	41.9 per cent.
Rainfall (on 15 days),	.869 inch.
Greatest Daily Rainfall (on 28th),	.160 ,,
General Directions of Wind,	W., S.W., E.

Remarks.

A splendid summerlike month, but with frequent showers at the beginning and close, and electrical disturbances from the 11th to the 13th inclusive, on the 20th (sheet lightning), and on the 28th. South-westerly winds—often blowing with considerable force—prevailed at first and also on the last 7 days, whereas light to moderate easterly winds accompanied a spell of high atmospheric pressure from the 10th to the 17th. The mean temperature (63.2°) nearly approached that of August, 1899, which established a record with its arithmetical mean of 63.4°.

In Dublin the arithmetical mean temperature (63.2°) was 3.5° above the average (59.7°); the mean of the dry-bulb readings at 9 a.m. and 9 p.m. was 62.0°. In the forty-seven years ending with 1911, August was coldest in 1881 (M. T. = 57.0°), and warmest in 1899 (M. T. = 63.4°). In 1910 the M. T. was 59.1°.

The mean height of the barometer was 29.944 inches, or 0.047 inch above the corrected average value for August—namely, 29.897 inches. The mercury rose to 30.263 inches at 9 a.m. of the 10th, and fell to 29.515 inches at 9 a.m. of the 24th. The observed range of atmospheric pressure was, therefore, 0.748 inch.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 62.0°. It was 0.4° below the value for July, 1911. Using the formula, *Mean Temp.* = *Min.* + (*Max.* — *Min.* × .47), the mean temperature was 62.8°, or 3.5° above the average mean temperature for August, calculated in the same way, in the thirty-five years 1871–1905, inclusive (59.3°). The arithmetical mean of the maximal and minimal readings was 63.2°, compared with a thirty-five years' average of 59.7°. On the 17th, the thermometer in the screen rose to 78.1°—wind, S.W.; on the 30th, the temperature fell to 50.9°—wind, W. The minimum on the grass was 46.8° on the 30th.

The rainfall was .869 inch on 15 days. The average rainfall for August in the thirty-five years, 1871–1905 inclusive, was 3.240 inches, and the average number of rainy days was 18. The rainfall, therefore, and the rain-days were much below the average. In 1900 the rainfall in August was very large—5.871 inches on 17 days; in 1889, also, 5.747 inches were registered on 22 days. On the other hand, in 1884, only .777 inch was measured on 8 days. August, 1905, established a record for rainfall in this month in Dublin, for the measurement was 7.019 inches on 22 days, 3.436 inches having fallen on the 25th. In 1910 the rainfall was 3.350 inches on 22 days.

High winds were noted on 9 days, but never attained the force of a gale (8). Temperature reached 70° in the screen on 14 days, and on no day fell below 50°. A solar halo was seen on the 4th, 5th, 17th and 19th. Fog was observed on the 10th. Thunderstorms occurred on the 12th, 13th and 28th.

The rainfall in Dublin during the eight months ending August 31st amounted to 11.592 inches on 109 days, compared with 24.382 inches on 149 days in 1910, 16.677 inches on 119 days in 1909, 17.244 inches on 135 days in 1908, 16.588 inches on 146 days in 1907, 15.425 inches on 139 days in 1906, 18.041 inches on 131 days in 1905, 16.808 inches on 135 days in 1904, 21.872 inches on 157 days in 1903, 18.456 inches on 133 days in 1902, 14.384 inches on 106 days in 1901, 9.455 inches on 96 days during the same

period in 1887, and a thirty-five years' average (1871–1905) of 17.950 inches on 131 days.

At the Normal Climatological Station in Trinity College, Dublin, Mr. C. D. Clark reports that the mean height of the barometer was 29.957 inches. The range of atmospheric pressure was between 30.260 inches at 9 a.m. of the 10th and 29.534 inches at 9 a.m. of the 24th. The mean value of the readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 62.8°. The arithmetical mean of the daily maximal and minimal temperatures was 62.9° The screened thermometers rose to 79.7° on the 17th and fell to 50.7° on the 30th. On the 11th the grass minimum was 41.5°. Rain fell on 15 days to the amount of .997 inch, the greatest fall in 24 hours being .261 inch on the 28th. The duration of bright sunshine, according to the Campbell-Stokes recorder, was 216.6 hours, of which 11.5 hours occurred on the 8th, and 11.4 hours on the 29th. In August, 1904, there were 183.75 hours of bright sunshine ; in 1905, 121.9 hours ; in 1906, 176.9 hours ; in 1907, 151.4 hours ; in 1908, 118.7 hours ; in 1909, 157.9 hours, and in 1910, 125.54 hours. The mean earth-temperatures were—at 1 ft., 63.7° ; at 4 ft., 60.8°.

At Ardgillan Castle, Balbriggan, Captain Edward Taylor, D.L., registered 2.34 inches of rain on 15 days, the greatest fall in 24 hours being .60 inch on the 23rd. The rainfall was 1.24 inches below the average and the rain-days were 3 in defect. Since January 1, 1911, 15.51 inches of rain have fallen on 109 days, the measurement being 3.26 inches in defect and the rain-days 16 less than the average. Thunderstorms occurred on the 28th and 29th.

Mr. T. Bateman reports that the rainfall at The Green, Malahide, Co. Dublin, was 1.94 inches on 14 days ; the heaviest fall in 24 hours was .545 inch on the 23rd. The mean shade temperature was 60.9°, the extremes being—highest, 75° on the 17th ; lowest, 46° on the 29th.

At the Ordnance Survey Office, Phœnix Park, Dublin, rain fell on 16 days to the amount of 1.253 inches, the largest measurement in 24 hours being .260 inch on the 28th. The total duration of bright sunshine was 192.4 hours, the longest daily spell being 12.3 hours on the 8th.

Miss C. Violet Kirkpatrick measured 1.60 inches of rain on

17 days at Cheeverstown Convalescent Home, Clondalkin, Co. Dublin, the largest record in 24 hours being .46 inch on the 28th.

Dr. Christopher Joynt, F.R.C.P.I., returns the rainfall at 21 Leeson Park as .850 inch, of which .120 inch fell on the 27th and again on the 28th. The rain-days were 17. The total fall since January 1 amounts to 12.019 inches on 104 days.

Mr. George B. Edmondson reports that at Manor Mill Lodge, Dundrum, Co. Dublin, the rainfall was 1.16 inches on 18 days. The maximal fall in 24 hours was .22 inch on the 28th. The mean shade temperature was 63.8°, the range being from 81° on the 17th to 50° on the 22nd.

Dr. Arthur S. Goff reports that at Lynton, Dundrum, Co. Dublin, rain fell on 17 days to the amount of 1.27 inches, the greatest daily fall being .22 inch on the 28th. The shade temperature ranged from 80° on the 8th to 52° on the 11th and 30th. The mean temperature in the shade was 63.7°. A thunderstorm occurred on the 28th.

According to Mrs. Olive F. Symes, at Druid Lodge, Killiney, Co. Dublin, 1.38 inches of rain fell on 15 days. The maximal fall in 24 hours was .42 inch on the 1st. The average rainfall at Cloneevin, Killiney, in August of the twenty-four years, 1884–1907, was 3.212 inches on 16.8 days.

According to Dr. J. H. M. Armstrong, at Coolagad, Greystones, Co. Wicklow, the rainfall for August was 1.93 inches on 16 days. The heaviest fall in 24 hours was .44 inch on the 23rd. The total fall since January 1 amounts to 11.58 inches on 93 days.

At Clonsilla, Greystones, Co. Wicklow, Dr. W. Stewart Ross recorded a rainfall of 2.02 inches on 12 days. The greatest measurement in 24 hours was .91 inch on the 1st. The mean temperature was 62.0°, the highest being 79.0° on the 15th ; the lowest, 45.0° on the 31st.

According to Mr. W. Miller, the rainfall in Cork City was 2.32 inches, or 1.17 inches less than the average, and the rain-days were 13, or 3 days in defect. The greatest fall in 24 hours was 0.47 inch on the 23rd. The mean temperature of the month was 60.2°, which is 0.5° above the average of 28 years. The thermometer rose to 73.0° on the 13th and fell to 45.0° on the 30th. The rainfall for 1911 up to August 31 was 18.12 inches on 103 days, compared with averages of 23.43 inches and 123 days respectively.

The Rev. Arthur Wilson, M.A., returns the rainfall at the

Rectory, Dunmanway, Co. Cork, at 3.39 inches on 18 days. The largest measurements in 24 hours were .70 inch on the 2nd and .52 inch on the 4th. At Dunmanway the first week was very stormy and unsettled. The remainder of the month was very fine and warm, especially from the 8th to the 18th and from the 21st to the 25th. The average rainfall in August, based on the returns for the last six years, is 4.81 inches. In 1911, the rainfall to August 31 equalled 33.35 inches, compared with a six years' average of 34.16 inches.

WASSERMANN'S REACTION.

THE sole conclusion which it is possible for us to draw from this study is that the reaction of Wassermann is of no value whatever in the diagnosis of syphilis. Such is the statement made by M. Pellon to the National Society of Medicine of Lyons (*Lyon Médical*, No. 29, July, 1911) as the result of a study of twenty-two labour cases and newly-born children at the Maternity Hospital, Lyons. He divides his cases into two groups—(1) those in whom there is neither evidence of nor the least suspicion of syphilis; (2) those in whom syphilis of both mother and child is probable or certain. The first group consists of seventeen infants, whose parents by examination and interrogation gave negative results. The children are normal; of good constitution; vigorous; increased in weight normally, and their placentas were in due proportion to their weight. Yet in fifteen cases the Wassermann reaction was positive and negative in two only. The second group consisted of five infants, in four of whom the reaction was positive and one negative. In this latter case the mother was certainly syphilitic. The author agrees consequently with MM. Bar and Daconay, who in 1907 wrote:—(1) There is no agreement between the reaction in the mother and the infant. (2) We cannot accept the negative result, for our clinical experience contradicts it. (3) The result positive is not at all trustworthy, for we have frequently observed that the results obtained in such cases were made on absolutely healthy babies. The blood in every case of children was taken from the cord at the time of its being cut, and was received into sterilised test tubes and immediately carried to the laboratory of parasitology of the Faculty, where it was examined by MM. Garin and Marsia, who were unconscious of its source.

PERISCOPE.

"MENINGISM" IN INFECTIOUS DISEASES.

In a review of "Medicine" in the *Edinburgh Medical Journal* for September, 1911, Dr. J. S. Fowler, M.D., F.R.C.P., writes :—"In some infectious diseases, notably pneumonia and typhoid fever, meningeal symptoms occur without definite signs of meningitis (absence of changes in the fluid obtained by lumbar puncture, and normal naked-eye *post-mortem* findings). To such cases the name 'meningism' is applied, and the condition is usually ascribed to toxæmia (Kirchheim and Schröder, *Deuts. Arch. f. klin. Med.*, Bd. ciii., p. 218, 1911). Schulze, however, found microscopic changes in the brain and cord in cases of so-called meningism complicating pneumonia ; these changes were of the nature of an encephalo-myelitis. In typhoidal meningism he, and also Sturzberg, failed to detect any definite changes in the brains and cords of patients dying with head symptoms. E. Fränkel investigated the subject from another standpoint—in how far, in infectious diseases, the causal organism localises itself in the brain. In sixty-four of eighty-five brains examined he found organisms, often in great abundance. In many, though not all cases, the organisms were accompanied by pathological changes in the brain, but Fränkel was able to show that analogous changes occurred in typhoid and in diphtheria, apart from the presence of micro-organisms in the brain. The conclusion, therefore, seems justifiable, that in cases of toxæmia involving the brain, whether it be due to toxins produced locally or carried by the blood-stream, the disturbance of function need bear no correspondence to the lesion. Symptoms may occur without anatomical changes, and *vice versâ*. Meningism exists apart from meningeal changes, and is caused by a toxæmia of the central nervous system. Kirchheim and Schröder have investigated a series of cases of meningism—*i.e.*, cases with well-marked meningeal symptoms, in which the cerebro-spinal fluid showed neither increase of albumen or of cells nor the presence of micro-organisms. The fluid was usually under pressure ; sometimes, however, the pressure was within normal bounds. The cases fall into two categories—those with, and those without, microscopical changes in the brain. In the first group fall two cases, both scarlet fever ; in the second five, two being scarlet fever and three pneumonia. Their results thus

confirm the conclusion already stated. Moreover, there seem to be no grounds for asserting, as some have done, that meningism constitutes an early stage of meningitis, or passes on into that disease."

In the light of this modern review of the subject it is interesting to recall the opinions advanced by Dr. William Stokes in his philosophic "Lectures on Fever," published by Messrs. Longmans, Green & Co. in 1874. He wrote: "It may be held that of the various symptoms indicative of suffering of organs in fever these [the nervous or cerebro-spinal symptoms] are the most remarkable; and, when developed to a certain point, the grounds of a worse prognosis than any others. And yet, so far as investigation has gone, they are less often connected with organic change than those belonging to the digestive, respiratory, or circulatory systems." He goes on: "It is possible that at some future day chemical or microscopical research will succeed in discerning anatomical change corresponding with the manifold nervous conditions of fever. As yet, however, this has not been done. . . . The assumption of inflammation of the brain in the presence of violent nervous symptoms in fever constitutes one of the greatest dangers to which young physicians are exposed, when they come to deal with the most formidable complication of the disease; aye, and old physicians, too, whose clinical education has been imperfect. I have known of the application of leeches to the head in an advanced case of cerebral fever with delirium ferox to be followed by sudden sinking and death."

EXTRACTION OF A PISTOL BULLET FROM THE CRANIAL CAVITY.

At the meeting of the National Society of Medicine of Lyons on the 24th of April, 1911 (*Lyon Médical*, No. 29, July, 1911), M. Jaboulay presented a man, sixty-five years old, from whom he, on the 25th of January last, extracted by trephining a pistol bullet from the cavity of the cranium. The patient had been shot through the roof of the mouth, the bullet traversed the face, the right orbit, the base of the skull, and penetrated to the cerebrum. The man never lost consciousness. He had a profuse epistaxis and a great extravasation of blood around the right orbit. Two months afterwards he became hemiplegic, and remained so for six weeks, but afterwards was able to resume his occupation, although he complained of vertigo and a pain in his head. A skiograph showed the bullet three-quarters to

one inch below the vault of the skull, to the right of the median line. "After excision of the dura mater we came on lesions of the meninges; a cyst of the cerebrum, which we opened, tamponed and ligatured such of its vessels as bled; we then discovered the bullet in the wall of the superior longitudinal sinus, from which we extracted it. None of the cranial nerves were injured, neither was there any injury to a single important blood vessel. The osteo-cutaneous fold was replaced in its natural position, and the wound was closed. Hemiplegia of the left side immediately followed, and two days afterwards an attack of Jacksonian epilepsy. The wound was opened, and some dark blood and a clot were removed. The hemiplegia gradually passed away, improvement commencing in the leg and thence to the arm, though he still finds a difficulty in using the arm. To-day the patient complains of neither vertigo nor headache—the conditions that called for operation."

THE OPERATIVE TREATMENT OF EXOPHTHALMIC GOÎTRE.

In *Lyon Médical* (No. 29, Tome CXVII., 1911), MM. X. Delore and H. Alamartine report the successful treatment of a case of exophthalmic goître by ligature of the four principal arteries of the thyroid gland. The patient was a young woman, twenty-one years old, very intelligent; no history of hereditary morbidity. Five years prior to her coming under the care of MM. Delore and Alamartine, two surgeons were consulted as to the advisableness of removing the enlarged gland. With praiseworthy perseverance she followed the treatment prescribed, and her condition was alternately better and worse until eighteen months prior to operation, when all the symptoms became markedly aggravated, and continued so. The exophthalmia was accentuated with the positive sign of von Graefe; the pulse varied from 120 to 130, but on the least excitement it rose to 180, with at the same time painful palpitations. The gland is markedly hypertrophied: a solid goître slightly more developed on the right side than on the left. At each contraction of the cardiac ventricle the gland is raised by the carotid pulse, and at the same time an expansion of the hypertrophied mass occurs. Slight pressure with the finger detects an intense thrill as of an arterio-venous aneurysm. Both the common carotids appear dilated and pulsate strongly. The patient complains of the palpitations, a sense of suffocation and a violent headache;

her face becomes congested; her frontal veins congested, and her eyes bloodshot. Her whole body trembles from her head to her feet. Her condition is such that an operation on the gland under a general anæsthetic cannot be considered possible; and it was therefore decided to ligature the thyroid arteries under local anæsthesia. Accordingly, on the 12th of November, 1910, the two superior thyroid arteries were ligatured close to their origin, but owing to the anæsthetic effects of the mixture of novocaïne and adrenaline not being complete some whiffs of ether were given, and the ligature of the remaining vessels was deferred. A severe reaction followed the operation, the temperature rose to 102.2° F.; violent palpitation with great agitation. On the 19th of November, seven days after the operation, union by first intention had taken place; and it was noticed that the right lobe of the thyroid had diminished by one third. The patient was again seen on the 28th of the following December, when she was found to be much better, and resumed her ordinary occupation. On the 16th of March, 1911, she returned to hospital requesting operation to free her from the vascular thrill which she felt in the gland and the deformity caused by the size of the left lobe of her thyroid. M. Delore ligatured the inferior thyroid artery, which had become enlarged to the size of the brachial. The operation was performed without a general anæsthetic, and was somewhat difficult by an anomaly of the artery, which arose from the common carotid. The patient made a quick and good recovery: the gland shrank to a small, hard mass, and all the distressing symptoms found in connection with Graves's disease disappeared, and the patient left hospital on the 1st of June, 1911.

NEW PREPARATIONS AND SCIENTIFIC INVENTIONS.

"Tabloid" "Xaxa" and Caffeine.

"Tabloid," "Xaxa" and Caffeine is issued by Messrs. Burroughs Wellcome & Co., containing 4 grains of "Xaxa" (Acetyl-Salicylic Acid) and 1 grain of Caffeine. It combines the specific antipyretic and analgesic action of "Xaxa" with the stimulant effect of caffeine on the circulation. It should, therefore, be of value in cases of pyrexia where the heart's action is weak. The diuretic action of the caffeine is also useful in febrile conditions. The dose is from one to five twice or thrice daily. "Tabloid" "Xaxa" and Caffeine is supplied in bottles of 25 and 100.

MEDICAL EDUCATION AND EXAMINATIONS IN IRELAND.

1911–1912.

Medical students in Ireland, as elsewhere, have in the first instance to choose between University Degrees and Non-University Qualifications or Diplomas. Should they elect to try for a University Degree, their choice must lie between the University of Dublin, which requires a Degree in Arts before registrable Degrees in Medicine, Surgery, and Midwifery are conferred, the National University of Ireland, which—while not requiring an Arts Degree—requires all students to pass a Matriculation Examination in Arts, before a candidate enters upon the curriculum in the three branches of medicine already mentioned—Medicine, Surgery, and Midwifery, and the Queen's University of Belfast, in which also a Matriculation Examination in Arts is required. Under the Regulations of the School of Physic in Ireland (*vide infrà*, page 295), considerable Professional Privileges are afforded to medical students in regard to the Arts Curriculum of the University of Dublin.

Outside the Universities, the chief Licensing Bodies are the Royal Colleges of Physicians and Surgeons. The position of the Apothecaries' Hall of Dublin as a Licensing Corporation under the Medical Act of 1886 has been defined by the appointment of Examiners in Surgery by the General Medical Council at the bidding of His Majesty's Privy Council.

The Royal Colleges of Physicians and Surgeons are in a position to give a first-class working qualification in Medicine, Surgery, and Midwifery—a qualification which is registrable under the Medical Acts, which is universally recognised as one of high merit, and the possession of which is attended by no disabilities, such as preventing its possessor from dispensing medicines or keeping open shop for the sale of medicines, if he is legally qualified to do so.

The Medical Schools in Ireland are—(1.) The School of Physic in Ireland, Trinity College, Dublin; (2.) The Schools of Surgery of the Royal College of Surgeons in Ireland (including the Carmichael College of Medicine and the Ledwich School of Medicine); (3.) The University College Medical School, Cecilia-street, Dublin; (4.) The Faculty of Medicine, Queen's University of Belfast; (5.) The School of Medicine, University College, Cork; and (6.) The School of Medicine, University College, Galway.

Facilities for Clinical Instruction in fully-equipped Medico-Chirurgical Hospitals exist in Dublin, Belfast, Cork, and Galway; but, as a rule, the Schools of Medicine in Ireland are not attached to a given hospital, or *vice versâ*, as is the case in London and other large centres of medical education. The student will, however, have little difficulty in selecting a hospital, in the wards of which he will receive excellent bedside teaching and have ample opportunity of making himself familiar with the aspect and treatment of disease.

The detailed information which follows is authentic, being taken directly from the published calendars of the respective licensing bodies.

REGULATIONS PRESCRIBED BY THE GENERAL MEDICAL COUNCIL.

With regard to the course of Study and Examinations which persons desirous of qualifying for the Medical Profession shall go through in order that they may become possessed of the requisite knowledge and skill for the efficient practice of the Profession, the General Medical Council have resolved that the following conditions ought to be enforced without exception on *all* who commence their Medical Studies at any time after Jan. 1, 1892:—

(*a.*) The period of Professional Studies, between the date of Registration as a Medical Student and the date of Final Examination for any Diploma which entitles its bearer to be registered under the *Medical Acts*, must be a period of *bonâ fide* study during not less than five years. For the purpose of this requirement the close of the fifth year may be reckoned as occurring at the expiration of fifty-seven months from the date of registration.

(*b.*) In every course of Professional study and Examinations, the following subjects must be contained:—

(I.) Physics, including the Elementary Mechanics of Solids and Fluids, and the Rudiments of Heat, Light, and Electricity.
(II.) Chemistry, including the principles of the Science, and the details which bear on the study of Medicine.
(III.) Elementary Biology
(IV.) Anatomy.
(V.) Physiology.
(VI.) Materia Medica and Pharmacy.
(VII.) Pathology.
(VIII.) Therapeutics.
(IX.) Medicine, including Medical Anatomy and Clinical Medicine.
(X.) Surgery, including Surgical Anatomy and Clinical Surgery.
(XI.) Midwifery, including Diseases peculiar to Women and to New-born Children. [By a recent decision of the General Medical Council the study of (XI.) must not commence till the student has held the posts of Clinical Clerk and Surgical Dresser.]
(XII.) Theory and Practice of Vaccination.
(XIII.) Forensic Medicine.
(XIV.) Hygiene.
(XV.) Mental Disease.

The first four of the five years of Medical Study must be passed at a School or Schools of Medicine recognised by any of the Licensing Bodies, provided that the First Year may be passed at a University, or Teaching Institution, recognised by any of the Licensing Bodies and approved by the Council, where the subjects of Physics, Chemistry, and Biology are taught.

A student who has, previous to registration, attended a course or courses of study in one or all of the subjects, Physics, Chemistry, or Biology, in any University, School of Medicine, or Teaching Institution recognised by any of the Licensing Bodies, may without further attendance be admitted to examination in these subjects: provided always that such course or courses shall not be held to constitute any part of the five years' course of professional study.

A graduate in Arts or Science of any University recognised by the General Medical Council, who has spent a year in the study of Physics, Chemistry and Biology, and has passed an examination in these subjects for the degrees in question, is held to have completed the first of the five years of medical study, provided that he has registered as a medical student with the General Medical Council.

The Examinations in the Elements of Physics, Chemistry, and

Biology should be passed before the beginning of the Second Winter Session.

The General Medical Council recommends the Licensing Bodies to require that the fifth year should be devoted to clinical work at one or more public hospitals or dispensaries, British or Foreign, recognised by any of the medical authorities mentioned in Schedule (A) of the Medical Act (1858), provided that no Qualification in Medicine ought to be granted without evidence of Clinical Instruction in Infectious Diseases.

I.

University of Dublin.

DEGREES AND DIPLOMAS IN MEDICINE, SURGERY, AND MIDWIFERY; AND IN DENTISTRY.

The Medical School of the University of Dublin has for its official title the name of The School of Physic in Ireland. It is officered by University Professors and Examiners and by four King's Professors appointed by the President and Fellows of the Royal College of Physicians of Ireland, acting as Trustees of the Estate of Sir Patrick Dun.

Matriculation.

Students cannot be permitted to attend any of the Courses of Instruction in the School of Physic in Ireland until they have Matriculated. There is no special Examination; the Public Entrance and Term Examinations of Trinity College, or any other of the Preliminary Examinations recognised by the General Medical Council, being accepted as equivalent. The Matriculation Fee is Five Shillings. It is not necessary for Students to have their names on the College Books, or to attend any of the Academical duties of the University, unconnected with the School of Physic, unless they desire to obtain a Diploma or Degree in Medicine, Surgery, and Midwifery. Students may matriculate at the commencement of either the Winter or the Summer Session. The 17th of November is the last day of admission to the Winter Session. In the Summer Session the day varies a good deal according to the time at which Easter occurs, and the Courses of Lectures for which the Student proposes to enter.

WOMEN STUDENTS.

Women Students are now admitted to the Degrees and Diplomas in Medicine, Surgery, and Midwifery, on the same conditions as men. A special Anatomical Department, with separate entrance, dissecting-room, and reading-room, has been erected by the Board of Trinity College for their accommodation.

The Qualifications in Medicine, Surgery, and Midwifery, and in Dental Science, granted by the University are as follow:—

The Degrees are:—

1. Bachelor in Medicine.
2. Bachelor in Surgery.
3. Bachelor in Obstetric Science.
4. Doctor in Medicine.
5. Master in Surgery.
6. Master in Obstetric Science.
7. Bachelor in Dental Science.
8. Master in Dental Science.

The Diplomas are:—

1. Diploma in Public Health (formerly Qualification in State Medicine).
2. Diploma in Medicine.
3. Diploma in Surgery.
4. Diploma in Obstetric Science.

REGULATIONS FOR OBTAINING MEDICAL OR DENTAL DEGREES.

I. *Arts Course.*—1. In order to join the Medical or Dental School a Student must have either—

(*a*) Passed a Junior Freshman Term Examination, exclusive of Trigonometry; or—

(*b*) Passed the Special Preliminary Examination held in March, the standard and subjects of which are those of the Hilary Junior Freshman Examination; or—

(*c*) Obtained at the Examination for Junior Exhibitions marks showing sufficient merit in the subjects of (*a*) or (*b*).

Note.—Rising Junior Freshmen desiring to begin their Medical or Dental Curriculum have the privilege of presenting themselves at either the Michaelmas Junior Freshman Examination (exclusive of Trigonometry) or the Supplemental Hilary Examination at the end of Trinity Term, without paying the May fee of the Junior

Freshman Year. But they obtain no academic credit for either examination beyond the right of entering the Medical or Dental School.

2. All Medical and Dental Students of undergraduate standing, who claim professional privileges in Arts, must attend at least one course of Arts Lectures in the Trinity Term of each year. The subjects of these lectures are as follow:—

Junior Freshman Year.

Mechanics (including Elementary Trigonometry) and English Composition.

Senior Freshman Year.

Logic (Formal) and English Composition.

Junior Sophister Year.

Astronomy and English Composition.

Senior Sophister Year.

Ethics and English Composition.

Note 1.—Students whose English Composition is unsatisfactory may be required to attend special lectures in that subject.

Note 2.—Students who enter the Medical or Dental School at the commencement of their Senior Freshman Year, and have obtained credit for only one term as Junior Freshmen, must, in the Trinity Term of the Senior Freshman Year, attend both the above Courses for Freshmen.

Note 3.—In order to obtain credit for the Lectures of the Junior Sophister Year, every Student must, in addition to attending the Lectures, pass an Examination in Astronomy at the end of the Term.

Note 4.—A Student who enters the Medical or Dental School as a Senior Sophister, and has not passed a Junior Sophister Term Examination which includes Astronomy, must attend, in the Trinity Term of the Senior Sophister Year, the Arts Courses of the two Sophister Years, as above.

In order to obtain credit for these Lectures he must pass an Examination in Astronomy as in *Note* 3.

3. Students who have entered the Medical or Dental School not later than the commencement of their Senior Freshman Year, and have obtained credit for such terms of Arts Lectures as they are required under Section 2 to attend in the Freshman Years,

will obtain credit for the Final Freshman Examination by passing—

(*a*) The Preliminary Scientific Examination of the Medical School, or the Preliminary Scientific Dental Examination and the Examination in Dental Anatomy.

(*b*) An Examination in Mechanics, Logics, English Composition, and one of the following languages :—Greek, Latin, French, German.

The Examination in Mechanics may be taken either at the ordinary Final Freshman Examination, or as in Section 4.

A Student need not have passed (*a*) in whole or in part before presenting himself for (*b*), but he must have passed both before the Trinity Lectures of his Junior Sophister year.

4. An Examination will be held in the Mechanics of the Final Freshman Course (including Elementary Trigonometry), at the date of each of the Preliminary Scientific Examinations.

5. No Student will be allowed to attend the Arts Lectures in the Trinity Term of the Junior Sophister Year until he has obtained credit for the Final Freshman Examination.

6. Students who have obtained credit for such attendance at Arts Lectures of the Sophister years as is required of them under Section 2, and who have made satisfactory progress with their Medical studies during those years (see Section 7), may present themselves for the Arts portion of their Degree Examination. This consists of Ethics and English Composition as in the ordinary Degree Examination.

7. The words "satisfactory progress" in Section 6 are thus interpreted. Before presenting themselves for the Arts Degree—

(*a*) Students who have entered the School not later than the commencement of their Senior Freshman Year must have passed Part II. of the Intermediate Medical Examination, or have passed the Intermediate Dental Examination, and kept one year at the Dental Hospital to the satisfaction of their teachers.

(*b*) Those who have entered the School not later than the commencement of their Junior Sophister Year must have passed Part I. of the Intermediate Medical Examination, or the Intermediate Dental Examination.

(*c*) Those who have entered the School not later than the commencement of their Senior Sophister Year must have passed the Preliminary Scientific Examination.

or the Preliminary Scientific Dental Examination, and the Examination in Dental Anatomy.

Note.—These regulations may be relaxed in the case of candidates for Moderatorship.

8. Students who have satisfied the conditions laid down in Section 6 may obtain credit for the Degree Examination, either—

(*a*) By passing in Ethics and English Composition at an ordinary Examination for the B.A. Degree, and passing Part II. of the Intermediate Medical Examination, or the Intermediate Dental Examination; or—

(*b*) By obtaining a Moderatorship, or by passing the full ordinary Examination for the B.A. Degree.

9. A Student who has failed to obtain credit for attendance at the Arts Lectures given in Trinity Term, whether through sickness, or irregular attendance, or want of diligence, or by failing to pass the Examination in Astronomy mentioned in Section 2, note 3, or from any other cause, may supplement the Term as follows:—

(*a*) If a Junior Freshman, he may pass the Junior Freshman Michaelmas Term Examination, or the Senior Freshman Hilary or Trinity Term Examination.

(*b*) If a Senior Freshman, he may pass the Supplemental Trinity Senior Freshman Examination in October, or in the following January; and may pass the Final Freshman Examination for Medical Students in Hilary or Trinity following.

(*c*) If a Junior Sophister, he may pass the Michaelmas Examination of his class, omitting the optional subject, or the Hilary or Trinity Examination of the Senior Sophister Year, taking one optional subject.

(*d*) If a Senior Sophister, he must pass a Senior Sophister Supplemental Examination, taking one of the optional subjects.

A Student who fails to comply with these Rules loses his class.

Note.—A Junior Freshman who is prevented by sickness, or other sufficient reason, from attending Lectures in Trinity Term, may, by special permission of the Senior Lecturer, take a second course in his Senior Freshman Year instead.

10. If at any time a Student is reported by the Medical School Committee to the Senior Lecturer, as having ceased to pursue his studies with diligence, he shall thereupon lose the privileges accorded to Medical or Dental Students, until such time as the

Medical School Committee report that he has resumed diligent attendance.

If such unfavourable report be made at the end of the Summer Session, the Student will obtain no academic credit for the Arts Lectures he may have attended during the Trinity Term of that year.

11. Medical and Dental Students who do not claim professional privileges may keep their course in Arts by passing the usual Term Examinations and Degree Examination in full. Those who have kept part of their course in this way may, at any time, claim the privilege of completing it under the scheme detailed above.

II. *Medical Course.*—Students who produce evidence of having passed the Special Preliminary Examination, or its equivalent (see above), pay a Matriculation fee of 5s., and proceed with the specified Courses and Examinations.

PRELIMINARY SCIENTIFIC EXAMINATION.

The subjects are—(*a*) Chemistry and Physics, and (*b*) Zoology and Botany. All the subjects may be passed at the same time, or they may be passed in two groups, (*a*) and (*b*).

Before presenting themselves for this Examination, Students must have attended the recognised Courses of Instruction in the subjects of the Examination.

INTERMEDIATE MEDICAL EXAMINATION.—PART I.

The subjects are—Anatomy, Histology and Physiology (omitting the Physiology of the Sense-Organs, and of the Central Nervous System). Both subjects must be passed at the same time.

Before presenting themselves for the Examination, Students must have attended the Courses of Instruction prescribed for the First and Second Years of Medical study, and *must have completed the Preliminary Scientific Examination.*

The Examination will consist of a paper, a practical, and an oral in each subject.

INTERMEDIATE MEDICAL EXAMINATION.—PART II.

The subjects are—Applied Anatomy and Applied Physiology, including the Physiology of the Nervous System and of the Sense-Organs). Both subjects must be passed at the same time.

Before presenting themselves for the Examination, Students

must have attended the prescribed Courses of Study, and *have completed Part I. of the Examination.*

The Examination will consist of a paper and an oral in each subject.

N.B.—The Courses of the Fourth Year cannot be commenced until Part I. of the Intermediate Examination has been completed.

Final Medical Examination.—Part I.

The subjects are—Pathology, Materia Medica and Therapeutics, Medical Jurisprudence and Hygiene.

Before they are admitted to the Examination, Students must have attended the prescribed Courses of Study, passed the Intermediate Medical Examination, Part II., and paid the *Liceat* Fee (£5).

Vaccination (Fee, £1 1s.) should be taken out in the fourth year.

Final Medical Examination.—Part II.

The subjects are—(*a*) Medicine, Clinical Medicine, and Mental Disease; (*b*) Surgery, Clinical Surgery, Surgical Operations, and Ophthalmic Surgery; (*c*) Midwifery and Gynæcology (clinical, papers, and *vivâ voce*).

Candidates for the Final in Surgery will be required to produce a certificate of instruction and practice in the administration of general Anæsthetics.

Students may present themselves for Examination in any of these groups (*a*), (*b*) or (*c*), separately or together, at any of the Examinations during their Fifth Year; but they must leave at least one of these groups until the end of their Fifth Year. Before presenting themselves for any of these groups, Students must have attended all the prescribed Courses of Instruction in the subject in which they present themselves for Examination, and paid the *Liceat* Fee (£5). Candidates in any group who fail to satisfy the Clinical Examiners are not permitted to proceed with the other parts of the Examination in which they have failed.

Total Expenses of foregoing Courses.

I. Lectures	.. ..	£67	4 0
II. Hospitals	.. ..	55	13 0
III. Degrees (M.B., B.Ch., B.A.O.)	..	27	0 0
	Total ..	£149	17 0

UNIVERSITY DIPLOMAS.

Candidates for the Diplomas in Medicine, Surgery, and Obstetric Science must be matriculated in Medicine, and must have completed two years in Arts, and five years in Medical Studies.

The dates, regulations, and subjects of Examination are the same as for the Degrees.

Diplomates on completing the Course in Arts, and proceeding to the Degree of B.A., may be admitted to the Degree of Bachelor on paying the Degree Fees.

The *Liceat* fees are the same as for the Finals.

Candidates who have completed the prescribed Courses of study and passed all the Examinations will be entitled, if Graduates in Arts, to have conferred on them the Degrees of M.B., B.Ch., B.A.O.. on payment to the Senior Proctor of the Degree Fees amounting to £17. A corresponding regulation applies to the Diplomas, the Fees for which are £11. They will also obtain from the Senior Proctor a Diploma entitling them to be entered on the Register of Medical Practitioners under the Medical Act, 1886.

RE-EXAMINATION.

Every Student who, having entered for any of the Medical Examinations, fails, for any reason, to obtain credit for it, shall pay a fee of 10s. 6d. for any occasion on which he presents himself again for the same Examination.

CLASS EXAMINATIONS.

Students will be required to show a reasonable knowledge, as ascertained by Examination during the Session, of the subject of a Course of Lectures before a certificate of satisfactory attendance is issued by the Professor in charge, and the return to the Senior Lecturer is to include a statement that this condition has been fulfilled.

DATES OF EXAMINATIONS FOR 1911–1912.

Preliminary Scientific begins—October 9; March 18; June 17.

Intermediate Medical, Part I., begins—October 9; March 11; June 10.

Intermediate Medical, Part II., begins—October 16; March 18; June 17.

Final Medical, Part I., begins—October 23; March 18; July 1.

Final in Medicine, begins—November 6; February 26; June 3.

Final in Surgery begins—November 13; March 4; June 10.

Final in Midwifery begins—November 20; March 11; June 17.

Notice of intention to enter must be given to the Registrar of the School *not less than eight clear days before* each Examination begins. Printed forms of notice are provided. Certificates, when required, and *Liceat* or re-examination fees, when due, are to be presented or paid when Students enter their names for the Examination. If this be not done entries will not be received.

ATTENDANCE ON LECTURES.

Students are expected to attend all the Lectures or Demonstrations delivered in each Course for which they enter, whether in the Winter or the Summer Session; but in order to provide for unavoidable absence, such as illness or attendance at Examinations, they are allowed credit for a Course if they have been present at three-fourths of the Lectures or Demonstrations actually delivered. If this proportion involve a fraction, the next highest whole number is reckoned as the minimum. If more than one-fourth have been missed, application must be made through the Committee of the School of Physic to the Board of Trinity College, by whom each case is decided on its merits, but the applicant must produce satisfactory reasons for omission of *all* the Lectures missed, not of the excess above one-fourth only. No Student will be allowed credit for a Course who has not been found diligent in attendance, when not prevented by illness or other cause considered sufficient by the Board.

HOSPITAL ATTENDANCE.

Three Courses of nine months' attendance on the Clinical Lectures of Sir Patrick Dun's or other Metropolitan Hospital recognised by the Board of Trinity College are required.

During the first three months of the Winter Session in which Students begin their Hospital work, they must attend an Elementary Course of Hospital Instruction for one hour per day.

The certificate for this Course must be signed by all the teachers who have taken part in the Instruction, and the attendances of each day must be entered in a list, supplied by the Board of Trinity College, and initialled by the teachers for that day.

Students will be required to attend on at least forty-five occasions in this three months' course in order to obtain credit for it.

During other years also a certificate of attendance at Hospital is required by the Board of Trinity College.

Students who shall have diligently attended the practice of a recognised London or Edinburgh Hospital for one year, of a recognised County Infirmary, or of a recognised Colonial Hospital for two years previous to the commencement of their Metropolitan Medical Studies, may be allowed, on special application to the Board of Trinity College, to count the period so spent as equivalent to one year spent in a recognised Metropolitan Hospital.

PRACTICAL VACCINATION. [a]

One month's instruction in Practical Vaccination is required, to be attended at the Vaccine Department, Local Government Board for Ireland, 45 Upper Sackville Street; at No. 1 East Dispensary, 11 Emerald Street; or, until further notice, at the Grand Canal Street Dispensary.

MENTAL DISEASE.

A Certificate of attendance on a three months' Course of Practical Study of Mental Disease in a recognised Institution is required.

PRACTICAL MIDWIFERY.

A Certificate of attendance on a six months' Course of Practical Midwifery with Clinical Lectures, including not less than thirty cases, is required.

OPHTHALMIC SURGERY.

A Certificate of attendance on a three months' Course of Ophthalmic Surgery is required.

DIPLOMA IN PUBLIC HEALTH OR STATE MEDICINE.

The Diploma in Public Health is conferred, after examination, by the University of Dublin, upon Candidates fulfilling the following conditions:—

1. The Candidate must be a Registered Medical Practitioner.

2. A period of not less than twelve months shall elapse between the obtaining of a registrable qualification and admission to any part of the Examination.

[a] The Local Government Board for Ireland require that Medical Officers of Dispensary Districts must have attended a six weeks' course of instruction in vaccination with six attendances, four being in consecutive weeks, must have passed an examination, and must have shown practical knowledge in performing Vaccination. The Local Government Board recognise only the Certificates issued by the Medical Officers of the Vaccine Department, Upper Sackville Street, Dublin, the Workhouse Infirmary, Cork, and the Workhouse Infirmary, Belfast.

3. [a] The Candidate must have completed, subsequent to obtaining a registrable qualification, a period of six months in a Laboratory, recognised by the Provost and Senior Fellows, in practical instruction in Chemistry and Bacteriology applied to Public Health, and also have attended, practically, Outdoor Sanitary Work for six months, under an approved Officer of Health, of which at least three months shall be distinct and separate from the period of Laboratory Instruction.

NOTE 1.—In the case of an Officer of the Royal Army Medical Corps, a certificate of outdoor sanitary work from a Staff Sanitary Officer may be accepted instead of one from a Medical Officer of Health.

4. The Candidate must, after obtaining a registrable Qualification, have attended during three months the practice of a Hospital for Infectious Diseases at which opportunities are afforded for the study of Methods of Administration. [b]

NOTE 1.—Methods of Administration shall include the methods of dealing with patients at their admission and discharge, as well as in the wards, and the Medical Superintendence of the Hospital generally.

NOTE 2.—In the case of an Officer of the Royal Army Medical Corps, a Certificate from a Principal Medical Officer under whom he has served, stating that he has, during a period of at least three months, been diligently engaged in acquiring a practical knowledge of Hospital Administration in relation to Infectious Diseases, may be accepted as evidence under *Rule* 4.

The Examination to be passed by the Candidate is prescribed as follows :—

PART I.

Chemistry—Paper and Practical.

Experimental Physics and Meteorology—Practical.

Bacteriology and Pathology—Paper and Practical.

Candidates are liable to be examined in the method of conducting *post-mortem* Examinations.

PART II.

Hygiene and Epidemiology—Paper.

Sanitary Engineering—Paper.

Public Health Acts and Vital Statistics—Paper.

Practical Sanitary Report.

[a] This condition does not apply to Practitioners registered or entitled to be registered on or before January 1, 1890.

[b] This condition does not apply to Practitioners registered, or entitled to be registered, on or before January 1, 1890.

The two Parts may be passed consecutively or with an interval between, at the option of the Candidate, provided that the requisite curriculum for each Part has been completed before the Candidate presents himself.

Examinations for Part I. will begin on December 4, 1911, March 18, 1912, and July 1, 1912; for Part II. on December 7, 1911, March 21, 1912, and July 4, 1912.

Candidates are required to send in their names to the Registrar of the School of Physic at least a week before the first day of Examination.

Candidates who have registered since January 1, 1890, are required to apply to the Board of Trinity College for leave to present themselves a month before the Examination begins, and to submit at the same time Certificates of the required Courses of Study.

A fee of £10 10s. is required. £2 2s. must be paid to the Registrar of the School on entering for Part I.; the balance to be paid to the Senior Proctor on applying for the Diploma.

Course in Chemistry for D. P. H.

The complete analysis of water. Estimation of carbon dioxide, and detection of ammonia and other constituents or impurities in air. Complete analysis of milk and butter. Detection of adulterants in milk, flour, tea, coffee, mustard, and pepper. Detection of preservatives in foods. Detection of picric acid in beer and of alum in bread and flour. Microscopic examination of starches. Determination of acidity in vinegar. Identification and examination of disinfectants. Detection of various poisons in contents of stomach. General chemistry of ether, chloroform, nitric acid, chloral. Assay of caffeïne.

Fee for the Course, £5 5s.

Candidates can join at any time during the Medical year by arrangement with the Professor of Chemistry.

Part II—D. P. H. Examination.

Vital Statistics and the Acts relating to Public Health in Ireland:—

Syllabus.

Vital Statistics.—Principles and methods of vital statistics; birth and death rates; their relation to age, sex, occupation and density of population; population and housing statistics; causes of increase and decrease of population; estimates of population;

emigration; practical construction of statistical tables; graphic methods of illustration; life tables.

Public Health Law.—Practical acquaintance with the provisions of the Statutes.

Books recommended.—"Vital Statistics" (Newsholme); Reports of the Registrars-General for the United Kingdom; Census Reports (on Vital Statistics and Emigration Reports); "Handbook of Irish Sanitary Law" (Birmingham).

SANITARY ENGINEERING.

Synopsis.—Construction of healthy dwellings. Collection and disposal of house refuse. Sanitary inspections and testing of drains and sanitary fittings. Sources of water supply. Collection and storage of water. Sources of pollution. Filtration and softening of water. Heating and ventilation of public and private buildings. Sewage disposal of towns, villages, and isolated dwellings. Planning and arrangement of hospitals, slaughter-houses, cowsheds, and dairies.

Books recommended to Candidates.—"Hygiene," by Notter and Firth; "The Purification of Sewage," by Dr. Barwise; "A Practical Guide for Sanitary Inspectors," by F. C. Stockman; "House-drainage and Sanitary Fitments," by G. J. G. Jensen.

A collection of Sanitary Appliances has been placed in the Engineering Museum, with which Candidates should make themselves familiar.

The attention of Students is directed to the importance of obtaining a Diploma in Public Health as soon as possible after they obtain their Medical Degrees. An increasing number of Public Bodies are requiring it as well as the usual Qualifications in Medicine, Surgery, and Midwifery.

II.

The National University of Ireland.

THE MATRICULATION EXAMINATION.

This Examination will be held in Dublin, and at certain local Centres selected by the Senate.

In the year 1912 two Examinations for Matriculation will be held.

The following are the groups of subjects for this Examination :—

(1) Latin, or Greek.

(2) Irish, French, German, Italian, Spanish, Dutch, or any other approved modern language.

(3) English, or History and Geography (one subject).

(4) Mathematics, or Physics.

(5) One other subject not already selected above from the following list :—Irish, English, Latin, Greek, French, German, Spanish, Italian, and any other modern language approved by the Senate. History and Geography, Mathematics, Physics, Chemistry.

Each student must pass in *five* subjects.

Students entering for Degrees in Arts, Philosophy, and Celtic Studies must take one subject from each of the above groups.

Students entering for degrees in Medicine must, in order to satisfy the regulations of the General Medical Council, take—

Latin.

English.

Mathematics, and

A second Language (which may be Irish).

Their fifth subject (not already selected) must be chosen from Group 5.

DEGREES OF M.B., B.Ch., AND B.A.O.

Printed Forms of application for admission to any Medical Examination may be had from "The Registrar, The National University of Ireland, Dublin."

Each Candidate must send to the Registrar a printed Form of Application for admission, *accurately filled up and signed by the Candidate*, together with the prescribed fee.

1. Students who pass the First Medical Examination in 1910, or have passed that Examination in any year previously in the Royal University, may take Practical Chemistry, if the prescribed Course of Instruction has been pursued, at a special examination before or with the Second Examination in Medicine of the National University of Ireland, and on passing this special Examination shall be regarded as having passed the First Examination in Medicine of the National University.

2. Students who have completed two years of study, and who pass the Second Examination in Medicine in 1910, may, on

completion of the Courses required for the Third Examination of the late Royal University of Ireland, take either (*a*) an Examination equivalent to the Third Medical Examination of the late Royal University of Ireland, in Autumn, 1911, or (*b*) an Examination in Anatomy and Physiology in Spring, 1911. In the latter case they will subsequently conform to the new Regulations; in the former case they conform to the new Regulations, omitting Materia Medica at the new Third Examination.

3. Students who, in October, 1910, have completed three years of study, and have passed the Third Medical Examination in 1910, may conform either to the new Regulations (omitting Materia Medica), or may finish their studies under the Regulations prescribed by the Royal University.

4. Students who have completed four years of study in October, 1910, may finish their studies under the Regulations prescribed by the Royal University.

THE M.D. DEGREE.

Candidates may present themselves for the Examination for this Degree after an interval of three academical years from the time of obtaining the M.B., B.Ch., B.A.O. Degrees; but in the case of Candidates who shall have obtained a degree of the University in the Faculty of Arts, an interval of two academical years shall be sufficient.

Printed Forms of application for admission to this Examination may be had from "The Registrar, The National University of Ireland, Dublin."

Each Candidate must send to the Registrar a Printed Form of application for admission, *accurately filled up and signed by the Candidate*, at least one month before the Examination, together with the prescribed fee of £2. He must at the same time produce a Certificate of having been, for at least two academical years, engaged in Hospital or Private Medical, Surgical, or Obstetrical Practice respectively, or in the Military or Naval Medical Service.

Each Candidate who satisfies the Examiners must pay a further fee of £3 before being admitted to the Degree.

Candidates at this Examination must answer in the following subjects:—

I. Medicine.

II. Pathology.

The Examination in each subject consists of :—

(*a*) A Written Examination.

(*b*) *An Oral* Examination.

In addition every Candidate must diagnosticate at the bedside at least three Medical cases, and prescribe treatment. He must also write detailed reports on at least two cases to be selected by the Examiners, and discuss the questions arising thereon.

THE M.Ch. DEGREE.

Candidates may present themselves for the Examination for this Degree after an interval of three academical years from the time of obtaining the M.B., B.Ch., B.A.O. Degrees; but in the case of Candidates who shall have obtained a degree of the University in the Faculty of Arts, an interval of two academical years shall be sufficient.

Printed Forms of application for admission to this Examination may be had from "The Registrar, The National University of Ireland, Dublin."

Each Candidate must send to the Registrar a printed form of application for admission, *accurately filled up and signed by the Candidate*, together with the prescribed fee of £2. He must at the same time produce a Certificate of having been, for at least two academical years, engaged in Hospital or Private Medical, Surgical, or Obstetrical Practice, or in the Military or Naval Medical Service.

Each Candidate who satisfies the Examiners must pay a further fee of £3 before being admitted to the Degree.

Candidates at this Examination must answer in the following subjects :—

I. Surgery, Theoretical and Practical, including Ophthalmology and Otology.

II. Surgical Pathology.

III. Surgical Anatomy and Operative Surgery, with the use of Surgical Instruments and Appliances.

As far as practicable, there will be a Written and an Oral Examination in these branches, and in addition every Candidate will be required to diagnosticate at the bedside at least three Surgical cases, and prescribe treatment. He must also write detailed reports on at least two cases, to be selected by the Examiners, and discuss the questions arising thereon.

THE M.A.O. DEGREE.

Candidates may present themselves for the Examination for this Degree after an interval of three academical years from the time of obtaining the M.B., B.Ch., B.A.O. Degrees; but in the case of Candidates who shall have obtained a degree of the University in the Faculty of Arts, an interval of two academical years shall be sufficient.

Printed forms of application for admission to this Examination may be had from "The Registrar, The National University of Ireland, Dublin."

Each Candidate must send to the Registrar a Printed Form of application for admission, *accurately filled up and signed by the Candidate*, at least one month before the Examination, together with the prescribed fee of £2. He must at the same time produce a Certificate of having been, for at least two academical years, engaged in Hospital or Private Medical, Surgical, or Obstetrical Practice, or in the Military or Naval Medical Service.

Each Candidate who satisfies the Examiners must pay a further fee of £3 before being admitted to the Degree.

Each Candidate must furnish satisfactory evidence that since graduating in Medicine he has (1) had personal charge of at least *twenty* cases of labour; and (2) attended during a period of three months the practice of a Clinical Hospital for Diseases of Women, where at least six beds are in constant occupation, or in a special Ward of a General Hospital where such cases only are treated, and containing at least six beds in constant occupation.

Candidates at this Examination must answer in the following subjects:—

I. Midwifery.

II. Diseases of Women and Children.

III. Pathology.

IV. The use of Instruments and Appliances.

The Examination in each subject consists of—

(*a*) An Oral Examination, with practical illustrations, including use of instruments and appliances.

(*b*) A Written Examination.

(*c*) A Clinical Examination, as far as practicable.

QUALIFICATIONS IN STATE MEDICINE.

This University grants a Diploma in Public Health and a B.Sc. in Public Health. The Diploma may be granted to matriculated students of the University who shall have completed approved courses of study, and shall have passed the prescribed Examination, provided that it shall not be granted except to a Registered Medical Practitioner. Candidates may present themselves for the Examination after an interval of not less than twelve months from the time of obtaining a registrable qualification in Medicine, Surgery, and Midwifery.

The Examination extends over not less than four days, one of which is devoted to practical work in a Laboratory, and one to Practical Examination in, and reporting on, subjects which fall within the special out-door duties of a Medical Officer of Health. Candidates must answer questions in the following subjects :—(1) Chemistry ; (2) Meteorology and Climatology ; (3) Sanitary Engineering and Architecture ; (4) Bacteriology ; and (5) Hygiene, Sanitary Law, and Vital Statistics. In connection with this part of the Examination Candidates will be required to draw up a sanitary report upon the condition of dwelling-houses or other buildings selected for the purpose, and read plans, scales, sections, &c.

The examination consists of two parts, which may be passed separately or together. Part I. comprises the following subjects :—Chemistry, Meteorology and Climatology, and Sanitary Engineering and Architecture. Part II. comprises the following subjects:—Bacteriology, Hygiene, Sanitary Law, and Vital Statistics. The Examination in each part will be oral and practical as well as written.

For the B.Sc. in Public Health, a Candidate shall not be admitted unless he (*a*) shall have received the Degrees of M.B., B.Ch., and B.A.O. at least one year previously ; (*b*) shall have pursued an approved course of study in the Faculty of Medicine ; and (*c*) shall have passed the prescribed Examination. In addition to D.P.H. course the Candidate will be required to take up (1) a Special Course of Pathology ; (2) Bacteriology : and (3) Advanced Course in Hygiene. Each of these Courses lasts three months.

III.

The Queen's University of Belfast.

DEGREES IN THE FACULTY OF MEDICINE.

Statutes.

1. There shall be six degrees of the University in the Faculty of Medicine, viz. :—

Bachelor of Medicine (M.B.),
Bachelor of Surgery (B.Ch.),
Bachelor of Obstetrics (B.A.O.),
Doctor of Medicine (M.D.),
Master of Surgery (M.Ch.), and
Master of Obstetrics (M.A.O.).

2. The degrees of M.B., B.Ch., and B.A.O. shall be the primary degrees in the Faculty of Medicine, and shall be conferred at the same time and after the same course of study. No student shall be admitted to the final Examination for these degrees until he as shhown (1) that he is a Matriculated Student of the University, (2) that he has completed the prescribed course of study in the Faculty of Medicine extending over a period of not less than five academic years from the date of his registration as a Student of Medicine by the General Council of Medical Education and Registration of the United Kingdom, and (3) that he has passed the several examinations prescribed.

3. The Senate shall not confer the primary degrees in the Faculty of Medicine upon any person who has not attended in the University during three academic years at least the courses of study prescribed for such degrees. The Senate may accept, for not more than two academic years of the required five, courses of study pursued in any other University or School of Medicine approved by the Senate.

4. Every candidate for the primary degrees in Medicine shall be required to show that he has attained the age of twenty-one years on or before the day of graduation.

5. The degrees of M.D., M.Ch., M.A.O. shall not be conferred, nor shall any of them, until the expiration of at least three academic years or in the case of graduates of the University in Arts or Science of at least two academic years after admission to

the primary degrees in the Faculty of Medicine. Every candidate must show that in the interval he has pursued such courses of study or been engaged in such practical work as may be prescribed. Any of these degrees may be conferred by the Senate either (*a*) after an examination or (*b*) on the submission of a thesis or other evidence of original study or research to be approved by the Faculty of Medicine after an oral or other examination of the candidate on the subject thereof.

THE DEGREES OF M.B., B.Ch., B.A.O.

Regulations.

1. All candidates for the Degrees of M.B., B.Ch., and B.A.O. shall be required to have satisfied the Examiners in the several subjects of four examinations, namely :—

The First Medical Examination.
The Second Medical Examination.
The Third Medical Examination.
The Fourth Medical Examination.

Two Examinations will be held during the year, namely—in Spring and Summer.

Candidates will not be allowed to present themselves for more than one of the Medical Examinations at the same time.

2. The subjects of the First Medical Examination shall be :—
   (1) Chemistry (Inorganic and Organic) and Practical Chemistry.
   (2) Experimental Physics and Practical Physics.
   (3) Botany and Practical Botany.
   (4) Zoology and Practical Zoology.

3. The subjects of the Second Medical Examination shall be :—
   (1) Anatomy and Practical Anatomy.
   (2) Physiology and Practical Physiology.

4. The subjects of the Third Medical Examination shall be :—
   (1) Pathology and Practical Pathology.
   (2) Materia Medica, Pharmacology, and Therapeutics.
   (3) Medical Jurisprudence.
   (4) Hygiene.

This Examination may be taken in two parts—
Part I. Pathology and Materia Medica.
Part II. Medical Jurisprudence and Hygiene.

5. The subjects of the Fourth Medical Examination shall be :—

(1) Medicine.

(2) Surgery.

(3) Midwifery.

(4) Ophthalmology and Otology.

This Examination may be taken in two parts.

Part I. Systematic.

Part II. Clinical, Practical and Oral.

(*a*) Candidates who have previously passed the Third Examination may present themselves for Part I. of the Fourth Examination at the close of the Fourth Year, provided that they have fulfilled the necessary requirements as to attendance, &c., on the courses of instruction in the subjects of examination.

(*b*) Candidates who have passed Part I. of this Examination may present themselves for Part II. at the close of the Fifth Year, provided that they have fulfilled the necessary requirements as to Hospital attendance on the various Clinical courses in the subjects of examination.

(*c*) Parts I. and II. may be taken together at the close of the Fifth Year.

(*d*) Attendance on a course in any subject of the Fourth Medical Examination shall not entitle a student to a certificate of attendance unless he has previously passed in all the subjects of the Second Medical Examination.

REGULATIONS AS TO CERTIFICATES OF ATTENDANCE IN THE VARIOUS COURSES FOR THE DEGREES OF M.B., B.Ch., AND B.A.O.

1. Candidates, who desire to enter for any of the Medica Examinations, must furnish certificates of attendance on the various courses dealing with the subjects of the respective examinations.

2. Candidates for the Final Examination for the Degrees of M.B., B.Ch., and B.A.O. are required to furnish the following certificates, in addition to those granted for attendance on the necessary academic courses :—

(1) Of having attended the medical and surgical practice of a hospital or hospitals, approved by the University, for

at least 27 months. Such attendance shall be reckoned only from the beginning of the Third Year of Medical Study.

(2) Of having acted as a Dresser for at least three months in the Surgical Wards, and as a clinical clerk for at least three months in the Medical Wards, of a Hospital recognised by the University. These attendances must not be concurrent.

(3) Of having received practical instruction in the methods of administration of Anæsthetics.

(4) In Practical Midwifery.

Every Student will be required either—

(*a*) To have regularly attended the indoor practice of a Lying-in Hospital, or the lying-in wards of a General Hospital, for a period of three months; and after having received therein practical instruction in the conduct of Labour, under the personal supervision of a Medical Officer, to have conducted twenty cases of Labour under official medical supervision; or

(*b*) To have conducted not less than twenty cases of Labour, subject to the following conditions:—

That he has during one month given regular daily attendance upon the indoor practice of a Lying-in Hospital or the lying-in wards of a General Hospital or Poor Law Infirmary having a Resident Medical Officer recognised for that purpose by the University; and that he has therein conducted cases of Labour under the personal supervision of a Medical Officer of the Hospital, who shall, when satisfied of the student's competence, authorise him to conduct out-door cases under official medical supervision.

No certificate that the student has conducted the above-mentioned twenty cases of Labour shall be accepted unless it is given by a member of the Staff of a Lying-in Hospital or of the Maternity Charity of a General Hospital or of a Dispensary having an obstetric staff recognised for that pur-

pose by the University or of a Poor Law Infirmary having a resident Medical Officer so recognised.

Every student before commencing the study of Practical Midwifery shall be required to have held the offices of Clinical Medical Clerk and Surgical Dresser, and to have attended a course of lectures on Surgery and Midwifery.

(5) In Gynæcology.

Every student shall present a certificate of having received Clinical Instruction in Diseases of Women, either in a Special Hospital for Diseases of Women recognised by the University or in a Special Ward for Diseases of Women in a General Hospital similarly recognised.

(6) In Diseases of Children.

Every student shall present a certificate of having received clinical instruction in Diseases of Children for a period of three months, either in a Children's Hospital or in a Children's Ward of a General Hospital recognised by the University.

(7) In Mental Diseases and Infectious Diseases.

Every student shall present a certificate of having attended approved courses of instruction.

(8) In Ophthalmology and Otology.

Every student shall present a certificate of attendance for a period of three months at an Hospital recognised by the University for clinical instruction in Diseases of the Eye and Ear.

(9) Every student shall present a certificate of attendance on a course of Vaccination held by a recognised teacher.

THE DEGREE OF DOCTOR OF MEDICINE.

REGULATIONS.

1. The Degree of Doctor of Medicine shall not be conferred until the expiration of at least three academic years, or in the case of graduates of the University in Arts or Science, of at least two academic years after admission to the primary degrees in the Faculty of Medicine. Every candidate must show that in the interval he has pursued such courses of study, or been engaged in such practical work as may be prescribed. This Degree may be

conferred by the Senate either (*a*) after an examination, or (*b*) on the submission of a thesis or other evidence of original study or research, to be approved by the Faculty of Medicine after an oral or other examination of the candidate on the subject thereof.

2. The subjects of the examination under (*a*) shall be :—

The Principles and Practice of Medicine, and one other special subject to be selected by the candidate.

The special subjects shall be as follow :—

i. Human Anatomy, including Embryology.
ii. Physiology.
iii. Pathology.
iv. Pharmacology and Therapeutics.
v. Sanitary Science and Public Health.
vi. Forensic Medicine and Toxicology.
vii. Mental Diseases.

The examination in Medicine shall include :—

(*a*) A written paper.
(*b*) A commentary upon a selected clinical case or cases.
(*c*) A clinical and *vivâ voce* examination.

The examination in the Special Subjects shall include :—

(*a*) A written paper.
(*b*) A clinical *or* practical and *vivâ voce* examination.

THE DEGREE OF MASTER OF SURGERY.

Regulations.

1. The Degree of Master in Surgery shall not be conferred until the expiration of at least three academic years, or in the case of graduates of the University in Arts or Science, of at least two academic years after admission to the primary degrees in the Faculty of Medicine. Every candidate must show that in the interval he has pursued such courses of study or been engaged in such practical work as may be prescribed. This Degree may be conferred by the Senate either (*a*) after an examination, or (*b*) on the submission of a thesis or other evidence of original study or research, to be approved by the Faculty of Medicine after an oral or other examination of the candidate on the subject thereof.

2. The subjects of the examination under (*a*) shall be :—

(1) Surgery, Theoretical and Practical, including Ophthalmology and Otology.

(2) Surgical Pathology.

(3) Surgical Anatomy and Operative Surgery, with the use of Surgical Instruments and Appliances.

There shall be both written and oral examinations in these branches, and a clinical examination upon selected surgical cases.

THE DEGREE OF MASTER OF OBSTETRICS.

REGULATIONS.

1. The Degree of Master of Obstetrics shall not be conferred until the expiration of at least three academic years, or in the case of graduates of the University in Arts or Science, of at least two academic years after admission to the primary degrees in the Faculty of Medicine. Every candidate must show that in the interval he has pursued such courses of study or been engaged in such practical work as may be prescribed. This Degree may be conferred by the Senate either (*a*) after an examination, or (*b*) on the submission of a thesis or other evidence of original study or research, to be approved by the Faculty of Medicine after an oral or other examination of the candidate on the subject thereof.

2. The subjects of the examination under (*a*) shall be:—

(1) Midwifery.

(2) Diseases of Women and Children.

(3) Pathology in its special bearing on Midwifery and Diseases of Women and Children.

The examination shall consist of:—

(1) A written examination.

(2) A clinical examination.

(3) An oral examination with practical illustrations, including those of instruments and appliances.

THE DIPLOMA IN PUBLIC HEALTH.

STATUTE.

The Senate may confer Diplomas in Public Health upon legally qualified medical practitioners who have pursued such courses of study and passed such examinations as may be prescribed: Provided always that the Regulations for such study and examinations are in accordance with the rules made from time to time by the General Council of Medical Education and Registration of the United Kingdom.

Examinations.

One examination will be held yearly, and will consist of two parts as specified below. Candidates may present themselves for either part separately, or for both parts together at their option.

The First Part of the Examination will have reference to the general principles of Sanitary Science, and will comprise the following subjects:—Principles and methods of volumetric and gravimetric chemical analysis, and their application to the analysis of air, water, milk, butter, beverages (alcoholic), foods, &c., ventilation, warming, water supply and drainage. Conditions determining the healthiness of sites for dwellings. Sources, storage and purification of drinking water. Elements of meteorology and climatology. Building construction in relation more particularly to dwellings, hospitals, and schools. The disposal and purification of sewage, and the disposal of refuse. The general principles of sanitary engineering. Disinfectants. Methods of bacteriological investigation and analysis. Pathology of infection, and of the diseases of animals transmissible to man.

The Second Part of the Examination will have reference to State Medicine and to the applications of Pathology and Sanitary Science, and will comprise generally the following subjects:—Laws and Statutes relating to Public Health. Model By-Laws of the Local Government Board. Sanitation of dwellings, schools, factories and workshops; and of villages and towns. Inspection of slaughter-houses, cow-sheds, &c. Inspection of meat and other articles of food. General Epidemiology, with special reference to the origin, pathology, symptoms, propagation, geographical distribution, and prevention of the epidemic, endemic, and other infective diseases both of temperate and of tropical climates. The methods applicable to the medical investigation of epidemics. Effects of overcrowding on health, also those of vitiated air, impure water, polluted soils, and of bad or insufficient food. Unwholesome trades and occupations and the resulting diseases. Nuisances injurious or dangerous to health. Relations of season and climate to health. The principles and methods of Vital Statistics in relation to Public Health.

All candidates will be examined in the provisions of the Statutes relating to Public Health in Ireland, but any candidate will be given an opportunity of showing a special knowledge of other Sanitary Laws in operation within the British Empire, provided

that, when applying for admission to the examination, he gives notice of his desire and indicates the Special Law he proposes to offer.

The examination in 1911 will begin on Tuesday, July 2. Candidates must lodge their names and pay the prescribed fees at the Secretary's Office on or before June 13.

The Certificates of Study required by the Regulations must be produced before admission to the examination.

The fee prescribed for each part of the examination is one guinea, and cannot be returned to any candidate who fails to present himself; but he will be entitled without an additional fee to be a candidate on one subsequent occasion. Every candidate who has passed both parts of the examination to the satisfaction of the Examiners, and who has paid the prescribed fee of five guineas, receives a Diploma testifying to his competent knowledge of what is required for the duties of a Medical Officer of Health.

A pamphlet giving all necessary information regarding entrance, examinations, lectures, fees, scholarships, prizes, &c., may be obtained on application to the Secretary of the University.

IV.

Royal Colleges of Physicians and Surgeons, Ireland.

REGULATIONS FOR THE EXAMINATIONS IN MEDICINE, SURGERY, AND MIDWIFERY REQUIRED FOR REGISTRATION UNDER THE MEDICAL ACT, 1886.

These Regulations are obligatory on all Candidates commencing their Studies on or after October 1st, 1902.

PRELIMINARY EXAMINATION AND REGISTRATION.

The General Medical Council requires that every Candidate shall produce evidence—

(*a*) Of having, before entering on medical studies, passed a Preliminary Examination in general education recognised by the General Medical Council; and

(*b*) Of having been registered by that Council as a Student in Medicine, according to Regulations, which may be obtained on application at the office of the General Medical

Council, 299 Oxford Street, London, W., or its Branches—Dublin, 35 Dawson Street; Edinburgh, 54 George Square.

Each Candidate before receiving his Diplomas must produce a Registrar's Certificate, or other satisfactory evidence, that he has attained the age of twenty-one years.

PROFESSIONAL EXAMINATIONS.

Every Candidate is required to pass four Professional Examinations.

Candidates will be admissible to the various Examinations as under :—

First Professional Examination, not earlier than the end of the first winter session.

Second Professional Examination, not earlier than the end of the second winter session.

Third Professional Examination, not earlier than the end of the third year of medical study.

Final Professional Examination, not earlier than the end of the fourth year of medical study; but it cannot be completed till the end of the fifth year of medical study.

No Candidate shall be admitted to any Examination within three months of his rejection in the subjects of that Examination by this or any other Licensing Body.

First Professional Examination.

Fees.

The Fee for this Examination is £15 15s.

The subjects of the First Professional Examination are :—

Division A.—Chemistry and Physics.

Division B.—Biology.

The Examination in Chemistry includes a Practical Examination in the Laboratory.

Candidates are recommended to present themselves in all the subjects of the First Professional Examination at one time, but they may present themselves either in Division A or in Division B provided that they have completed the curriculum as far as it concerns the "Division" in which they present themselves for Examination.

Second Professional Examination.

Fees.

The Fee for this Examination is £10 10s.

The subjects of the Second Professional Examination are :—

Division A.—Anatomy.

Division B.—Physiology and Histology.

Before admission to the Second Professional Examination every Candidate must have passed in the subjects of the First Professional Examination.

Third Professional Examination.

Fees.

The Fee for this Examination is £9 9s.

The subjects of the Third Professional Examination are :—

Division A.—Pathology.

Division B.—Materia Medica, Pharmacy, and Therapeutics.

Division C.—Forensic Medicine and Public Health.

Before admission to the Third Professional Examination, every Candidate must have passed in the subjects of the Second Professional Examination.

Candidates may present themselves in any one or more "Divisions," but Certificates of study in all three Divisions must be produced before Candidates will be permitted to present themselves for examination in any one Division.

Final Professional Examination.

Fees.

The Fee for this Examination is £6 6s.

The subjects of the Final Professional Examination are :—

Division A.—Medicine, including Fevers, Mental Diseases, and Diseases of Children.

Division B.—Surgery, including Operative Surgery and Ophthalmic Surgery.

Division C.—Midwifery and Gynæcology, Vaccination, and Diseases of New-born Children.

Before admission to the Final Professional Examination, every Candidate must have passed in the subjects of the Third

Professional Examination, and is required to produce evidence of having diligently attended :—

Division A.—The Practice of a Medico-Chirurgical Hospital for nine months (unless such evidence has been previously produced for admission in Division B).

The Practice of a recognised Fever Hospital, or the Fever Wards of a recognised Clinical Hospital, three months.

Clinical Instruction in Mental Diseases, one month (12 attendances).

Lectures on Medicine, six months at a recognised Medical School.

Of having diligently performed the duties of Medical Clinical Clerk in a recognised Hospital for three months.

Division B.—The Practice of a Medico-Chirurgical Hospital, nine months (unless such evidence has been previously produced for admission in Division A).

Clinical Instruction in Ophthalmic and Aural Surgery, three months.

Lectures on Surgery, six months at a recognised Medical School.

Instruction in Operative Surgery, three months at a recognised Medical School.

Of having diligently performed the duties of Surgical Dresser in a recognised Hospital for three months.

Division C.—Midwifery Hospital, or Maternity, including evidence of having been present at twenty labours, six months.

Instruction in Vaccination; six attendances to be certified by a Public Vaccinator.[a]

Lectures on Midwifery (including Diseases Peculiar to Women and to New-born Children), six months at a recognised Medical School.

[a] By a Regulation of the English Privy Council no one can be appointed a Public Vaccinator in England who does not produce a certificate of proficiency in vaccination from a person authorised by the English Privy Council to grant same.

Candidates are recommended to present themselves in all the subjects of the Final Examination at one time ; but a Candidate at or after the end of the fourth year may present himself in any one of the Divisions A, B, or C, provided he has completed his Curriculum as far as concerns the Division in which he presents himself. The Examination in at least one of the Divisions must be deferred till the end of the fifth year.

Before completing the Final Examination a Candidate must have passed four years in Medical Studies other than those for the First Professional Examination.

Candidates must have passed in all the subjects of the Final Examination before any Diploma can be granted.

Each Candidate before receiving his Diplomas must produce a Registrar's Certificate, or other satisfactory evidence, that he has attained the age of twenty-one years.

EXEMPTIONS.

Candidates who have passed in any of the required subjects at Examinations conducted by any Licensing Body recognised by the Royal College of Physicians and the Royal College of Surgeons may, at the discretion of the Committee of Management, be exempted from further examination in such subjects under these regulations.

CERTIFICATE OF STUDY.

All Lecture Certificates shall be signed by the Lecturer or Clinical Teacher. In case of absence or illness of the Lecturer or Teacher the Registrar or other duly accredited official shall sign for such absent Lecturer or Teacher, stating the reason for his so doing.

Winter Courses shall consist of not less than 50 Lectures, and Summer Courses of not less than 30 Lectures.

No Lecture Certificate shall be received unless the number of attendances certified thereon shall be at least *two-thirds* of these numbers.

As regards Medical and Surgical Hospital Certificates, the number of daily attendances certified shall not be less than 80 for the Winter Session, and 40 for the Summer Session.

REGULATIONS FOR CANDIDATES FOR THE DIPLOMA IN PUBLIC HEALTH.

The following Regulations are compulsory on all Candidates presenting themselves for Examination after January 1st, 1903, except as undernoted.

Stated Examinations for the Diploma in Public Health commence on the first Monday of the months of February, May, July, and November.

A special Examination for the Diploma may, at the discretion of the Committee of Management, be obtained—except during the months of August and September—on application at least one fortnight before the date of the proposed Examination, and payment of £15 15s. in addition to the ordinary Fees mentioned below.

Every Candidate for the Diploma in Public Health must be a Registered Medical Practitioner. He must return his name to the Secretary of the Committee of Management under the Conjoint Scheme, Royal College of Physicians, Dublin, one fortnight before the Examination, and lodge with him a Testimonial of Character from a Fellow of either of the Colleges, or of the Royal Colleges of Physicians or Surgeons of London or Edinburgh, together with certificates of the prescribed course of study.

Candidates registered as Medical Practitioners or entitled to be so registered after January 1st, 1890, must comply with certain Resolutions and Rules, adopted by the General Medical Council on December 2nd, 1902, May 29th and November 30th, 1903, May 31st, 1904, and May 25th and 26th, 1905, in regard to Diplomas in Public Health.

*** Certain of the *Rules* as to study shall not apply to Medical Practitioners registered, or entitled to be registered, on or before January 1st, 1890.

The Fee for the Examination is Ten Guineas, which must be lodged in the Ulster Bank, Dublin, to the credit of the Committee of Management. Fees are not returned to any Candidate who withdraws from, or is rejected at, any Examination. The Fee for re-examination is Five Guineas.

The Examination for the Diploma in Public Health comprises the following subjects:—Chemistry and Physics, Engineering and Architecture, Meteorology, Sanitary Law, Vital Statistics, Hygiene, Bacteriology.

V.

Apothecaries' Hall of Ireland.

The First, Second, and Third Professional Examinations are held four times a year—viz., commencing the first Monday in January, April, July, and October.

The Final Examinations are held quarterly.

The Fees payable for each Examination are as follow:—

First Professional	- -	£5	5 0
Second „	- -	5	5 0
Third „	- -	5	5 0
Final Examination	- -	6	6 0

A Candidate is allowed for each Professional Examination which he has completed at any other Licensing Body, except the Final.

Ladies who comply with the regulations will be admitted to these examinations.

Candidates may be admitted to a Special Examination, under special circumstances, which must be laid before the Examination Committee. If the Candidate's application be granted, an extra fee of Ten Guineas over and above the full fee is required.

Candidates already on the Register will receive the Diploma of the Hall, on passing an Examination in the subjects which are not covered by their previous qualifications, and on paying a fee of Ten Guineas. If Medicine or Surgery is required, additional fees will be charged.

COURSE OF STUDY FOR THE DIPLOMA.

Candidates who desire to obtain the Letters Testimonial of the Apothecaries' Hall of Ireland must, before proceeding to the Final Examination, produce evidence of having been registered as a Medical Student for 57 months; also of having attended Courses of Instruction as follows:—

Winter Courses of Six Months.

One Course each of the following:—Anatomy (Lectures). Chemistry—Theoretical. Midwifery. Practice of Medicine. Physiology, or Institutes of Medicine. Surgery. Dissections, two courses of six months each.

Courses of Three Months.

One Course of each of the following:—Materia Medica. Medical Jurisprudence. Chemistry—Practical. Practical Physiology and Histology. Operative Surgery. Physics. Clinical Ophthalmology. Biology. Clinical Instruction in Mental Disease. Pathology. Vaccination.

Medico-Chirurgical Hospital, twenty-seven months, to be distributed at the Student's own discretion over the last four years of his study. The Candidate may substitute for nine months of this Hospital Attendance six months as a Resident Pupil. He will be required to present a certificate of having taken notes of at least

six Medical and six Surgical cases recorded under the supervision respectively of a Physician and of a Surgeon of his Hospital.

Three months' study of Fever—which may be included in his twenty-seven months' Hospital Attendance—in a Hospital containing Fever Wards, and having taken notes of at least five cases of Fever.

Six months' Practical Midwifery and Diseases of Women during the Winter or Summer of the third or the fourth year, at a recognised Lying-in Hospital or Maternity.

Three months' Practical Pharmacy, in a recognised Clinical Hospital or a recognised School of Pharmacy, or a year in the Compounding Department of a Licentiate Apothecary or a Pharmaceutical Chemist.

Each Candidate, before receiving his Diploma, must produce evidence that he has attained the age of twenty-one years.

Licentiates of this Hall are entitled to enter as Candidates for the Fellowship of the Edinburgh Royal College of Surgeons.

EXAMINATIONS FOR THE DIPLOMA.

All information relative to the Examinations may be obtained from the Registrar of the Apothecaries' Hall, 40 Mary Street, Dublin.

VI.

Dental Education and Examinations in Ireland.

UNIVERSITY OF DUBLIN.

DEGREES IN DENTAL SCIENCE.

Combined Arts and Dental Curriculum.

The University of Dublin grants the degrees of Bachelor and Master in Dental Science.

Either of these qualifications entitles the holder to be registered as a licensed Dental Practitioner.

In order to obtain the Degree of Bachelor (B. Dent. Sc.), Candidates must have completed the course for the Arts Degree (B.A.) of the University and have spent at least four years in the School of Dentistry. The Degree of Master in Dental Science (M. Dent. Sc.) is awarded after a further examination, and cannot be taken until the end of a fifth year of study.

The Dental and Arts Courses may be taken separately or concurrently.

It is to be understood (*a*) that the Arts Courses to be attended by Dental Students are the same as those to be attended by Medical Students; and (*b*) that, with certain exceptions, the Professional Courses necessary for Dental Students are the same as those for Medical Students.

At the completion of the fourth year the Student should enter for the Final Dental Examination, the subjects for which are—

Dental Mechanics and Metallurgy.
Paper, Practical and *Vivâ voce.*

Dental Surgery and Pathology, including Materia Medica and Therapeutics in their application to Dental Surgery.
Paper, Practical and *Vivâ voce.*

Orthodontia. *Vivâ voce.*

The Principles of Surgery and Medicine in their application to Dental Surgery. *Vivâ voce.*

The Degree of Bachelor in Dental Science is conferred on Students who have completed the above Courses and Examinations, and passed the B.A. Degree Examination in Ethics and English Composition.

The total fees in order to obtain the degree of Bachelor in Dental Science are :—

Entrance fee and Arts fees (4 years)	£84 10 0
Lecture, Laboratory, and Hospital fees	180 12 0
Examination fee	5 0 0
Fee for Degree	50 0 0
	£280 2 0

MASTER IN DENTAL SCIENCE.

Candidates for the Degree of Master in Dental Science must be Bachelors in Dental Science of at least one year's standing. They will be required to pass an examination in Pathology and Bacteriology, and either to carry out Dental work of an advanced character to the satisfaction of the Examiners, or to present a thesis to be approved of by them, giving evidence of original research on some subject connected with Dentistry.

DATES OF DENTAL EXAMINATIONS FOR 1911-12.

Preliminary Scientific begins : October 9, March 18, June 17.
Intermediate begins : October 9, March 11, June 10.
B. and M. Dent. Sc. begin : November 13, March 4, June 10.

Notice of intention to enter must be given to the Registrar of the School *not less than eight clear days before* each Examination begins. Printed forms of notice are provided. Certificates, when required, and examination or re-examination fees, when due, are to be presented or paid when Students enter their names for the Examination. If this be not done, entries will not be received.

Graduates in Medicine of the University of Dublin who desire to take a Degree in Dentistry are admitted to the B. Dent. Sc. Examination on producing certificates as follows:—

(1) One year's attendance at the Surgical practice of a recognised Dental Hospital.

(2) Two years' practical Dental Mechanics.

(3) Lectures on Dental Surgery and Pathology, Mechanics, Anatomy, Orthodontia, and Anæsthetics.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

DIPLOMA IN DENTAL SURGERY.

The Royal College of Surgeons in Ireland grants Diplomas in Dental Surgery under revised conditions adopted by the Council on November 25, 1909, of which the following is a synopsis:—

The Candidate must be twenty-one years of age before being granted the Diploma.

The Candidate must have passed three Examinations.

1. Preliminary (identical with the Medical Preliminary).

2. First Dental. (This Examination is much the same as the Second Conjoint Professional.)

3. Final Dental Examination. Candidates are examined in General Pathology, Medicine and Surgery; Dental Surgery, and Dental Pathology, with the Materia Medica and Therapeutics applicable to Dental Surgery; Dental Mechanics and Metallurgy; Orthodontia.

Large reductions in the Special Certificates required are made in the cases of qualified Medical Practitioners.[a]

As regards Dental Hospital practice, full information is contained in the Calendar for 1911-12 of the School of Dentistry in connection with the Incorporated Dental Hospital of Ireland, Lincoln Place, Dublin. The Calendar may be obtained on application to the Dean.

[a] Fuller particulars can be obtained by application to the Registrar, Royal College of Surgeons, St. Stephen's Green, Dublin.

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OF

MEDICAL SCIENCE.

NOVEMBER 1, 1911.

PART I.

ORIGINAL COMMUNICATIONS.

ART. XII.—*Some Surgical Symptoms in Childhood.*[a]

By J. BOYD BARRETT, M.B., B.Ch., Assistant Surgeon, Children's Hospital, Temple Street, Dublin.

IT may be intelligence of a startling nature to some here, when the fact is recalled that the special study of disease in children is of quite a modern origin. In 1896 an attempt was made to bring about greater interest in this branch of medicine in England by the publication of an Anglo-American Journal, entitled *Pediatrics*. The venture failed, although supported by the contributions of many men of world-wide reputation. In the words of the late eminent Dr. Carpenter, at that time the English editor, "The psychological moment had not yet arrived." *Pediatrics*, as an American journal, is still flourishing.

The first epoch in the history of pediatrics in England was the establishment in 1900 of the Society for the Study of Disease in Children. From the commencement this

[a] A paper read before the Medical and Scientific Society of University College, Dublin, April, 1911.

proved a success, and for eight years, until its incorporation into the Royal Society of Medicine, valuable reports were published which did much to stimulate and concentrate interest. In 1895 the only works devoted solely to the surgery of children were those of Mr. Holmes, Mr. Owen, and Mr. D'Arcy Power; and in the first edition of Mr. Power's "Surgical Diseases of Children and their Treatment by Modern Methods," published in 1895, no mention is made of the so-called congenital stenosis of the pylorus. At that time, too, there were but a few books in German on the subject, and still fewer in French. The work of Messrs. Ashby and Wright, now in its fifth edition, enjoying a deserved popularity, and Keating's "Cyclopædia of the Diseases of Children," combined medicine with surgery.

Fifteen years has wrought a great change in this respect, so that at the present time, judging from the lists of publishers and the freights with which the seductive travellers for medical books are burdened, and wish to relieve themselves, works on the diseases of children are "frequent," and, I fear, often "free."

While it is impossible to define exactly the termination of childhood, and the approach of adolescence, it is necessary to place some limit to that period of life whose ills and injuries have their own special characteristics. Authorities differ on this question. The majority of authors of medical works on children seem to deal with that breezy period of our existence which terminates with our tenth year. This is sub-divided into infancy and earlier and later childhood, eminently useful factors in ætiology and diagnosis.

In 1887 was described, for the first time, by Hirschsprung, whose name is also associated with congenital dilatation of the colon, that interesting condition, the so-called congenital hypertrophy or stenosis of the pylorus. What was first considered to be an extreme rarity has now come, through the spread of knowledge, to be recognised more frequently, and although the cause is still

under considerable doubt, the symptoms, which I shall shortly relate, are definite and unmistakable. In fact, this condition presents a picture which, if at one time in doubt, becomes clearer and more remarkable every day, until the diagnosis is a matter of the utmost simplicity.

Examination of the stomach in fatal cases has shown a remarkable similarity in the changes undergone. A narrowing in the lumen of the pylorus with marked hypertrophy, due to hyperplasia of the circular muscular fibres, dilatation of the stomach with thickening of the walls, have been the characteristic changes. Many attempts have been made to find the nature of this affection. Some hold there is no hypertrophy, no stenosis, and that the stomach is normal. Others say the hypertrophy is a congenital condition which generates stenosis. Cautley explains it as an effort of nature to sufficiently close the pylorus. Löbker asserts there is a muscular tumour. Pritchard considers the spasm is due to fissure. Thomson speaks of it as due to inco-ordination of the gastric and pyloric muscles. Hyperchloridia has also been mentioned as a cause. I have always thought that it would be difficult to exclude as a cause of this condition—characterised solely by muscular hyperplasia, with the symptom of projectile vomiting—that violent peristaltic action in infants, which is recognised as a factor in the production of acute intussusception. The symptoms of this affection, which can reduce a healthy infant of 9 lbs. to a mere skeleton, begin sometimes at birth, sometimes not until the second month, but most usually between the second and fourth week. The onset is characterised by vomiting, and subsequently by constipation and wasting. The vomiting has certain features suggestive of the disease. It is forcible and projectile, the food coming up suddenly, rushing sometimes through the nose. It may occur only a few times during the twenty-four hours, and the contents represent more than one feed. It is influenced by diet. A temporary improvement may follow the substitution of whey or peptonised milk; but it recurs.

As a natural result of the vomiting comes constipation of a peculiarly obstinate character. The bowels do not act without aperients and enemata, and the evacuations resemble meconium. Wasting, the last symptom, comes on slowly, but surely. It is characterised by its deadly progressive nature and by the fact that it cannot be attributed to faulty feeding. Observers have noticed in these cases that while the hypogastric region was sunken there was a marked fulness of the gastric area. This is only reasonable when one remembers the dilatation of the stomach found at the *post-mortem* examinations.

Two physical signs are associated with this disease, and some hesitate to give a diagnosis in their absence. They are the presence of a palpable pyloric tumour and visible peristalsis of the stomach. The treatment is medical at first, such as stomach-washing and careful dieting. If the vomiting and loss of weight continue, recourse must be had to surgery. Statistics give the best results after posterior gastro-enterostomy.

I have detailed the symptoms with the hope of making clear the difference between such cases and those of ordinary marasmus—a grave diagnostic error—and end by mentioning that the condition is found as often in fat breast-fed babies as in those who have to depend on artificial feeding.

Convulsions in children are symptoms of an alarming nature. They are classified clinically into idiopathic and symptomatic. Of the former, often no cause can be found, or they may represent the occurrence in early life of genuine epilepsy. The symptomatic may be of reflex character, due to irritation of colic, phimosis, teething, enteritis, or rickets. They also occur at the onset of an acute illness, such as pneumonia, poliomyelitis, or any other acute specific fever. They take the place in infancy and early childhood of the "rigors" of adult life.

There is, however, one condition characterised by the almost constant presence of "chills" and "rigors" in early life, and that is acute pyelitis, cystopyelitis, or infection of the urinary tract by the colon bacillus.

This infection in children is at the present time attracting much attention, with the result that the diagnosis is much more frequently made than was formerly the case. At the last meeting of the British Medical Association papers were read by Mr. Pardo and Dr. Box, and a discussion followed, at which were enunciated opinions showing a remarkable similarity.

That this trouble has only recently been recognised as at all common in children was proved by a statement of Dr. Jeffreys of the Hospital for Sick Children, Great Ormond Street. He gave an analysis which showed that the earliest case occurred in that institution in 1902. There was only one in 1904; in 1906 there were two; in 1909 there were fifteen, and there had been ten in 1910. Undoubtedly, the cases had been overlooked in former years. We must, therefore, be alive to the presence and possible frequence of this conditon, and err on the side of care.

The symptoms experienced by most of the observers were (1) an unexplained pyrexia, (2) with "chills" and "rigors," (3) restlessness, sleeplessness, and a certain amount of pain, (4) the absence of any localising signs, and (5) the presence of foul-smelling, acid urine, glistening and turbid, (6) passed sometimes with pain, if cystitis should be present, which is not always the case, (7) and occurring, in the large majority of cases, in female infants and children, and occasionally associated with a history of thread-worms. The diagnosis was finally made by microscopic investigation. I saw, some time ago, a girl of four years, suffering from this condition, having a distinct "rigor." Before or since I have never seen a "rigor" in a child. Boys are seldom attacked. The infection is generally supposed to be an ascending one. This presumption is strengthened by the sex incidence. Abt found twenty-one females and only one male. Escherich ten females and no males, Finkalstein seven females and no male, and Dr. Box eighteen females and one male. The hand, the oxyuris vermicularis, and

general want of cleanliness are causes or predisposing conditions.

The treatment is rest in bed, milk diet, and increasing doses of citrate of potassium in acute cases until the urine is alkaline and the temperature normal. A vaccine treatment is recommended for chronic cases.

There is another condition in children, some symptoms of which I wish to emphasise—which sometimes escapes observation—namely, stone in the bladder. Now, renal calculi are extremely rare in children, as, indeed, are any affections of the kidneys, in comparison to adults. Morris, out of 283 operations for renal calculus, found only one in a child. On the other hand, vesical calculi, if not frequently met with, are far from rare. As in adults, much depends on the locality. Stone in the bladder in children is, to a certain extent, common in India and Hungary.

The symptoms associated with the presence of calculi are, to some extent, the same in children as in adults. But it must be remembered that children give a very bad, or no, account of local sensations. Then, again, I have noticed, and was glad to see it recorded by Kermisson, that a stone may be present in a child without any appearance of hæmorrhage or hæmaturia. In a child suffering from vesical calculi the urine is held as long as possible—intuitively avoiding pain. The overflow causes a trickling of drops of urine. Micturition, in the ordinary sense, does not frequently take place, and in female children there is generally found an eczematous condition of the vulva from the constant moisture. The flow may be interrupted, and, in boys with acute retention of urine, a stone impacted in the urethra may be looked for. On the other hand, a stone may cause few symptoms. It is, however, a condition very frequently unrecognised, but one, so simply decided, by the passage of a sound, once suspicions are aroused, that we should be always mindful of the possibility of the occurrence of such a source of pain and ill-health.

There are two other conditions to which I would like to refer before concluding—namely, appendicitis and intussusception. The classic symptoms of both are well known, and do not deserve repetition.

There are, however, three points which merit consideration in reference to appendicitis in the young, and two in connection with intussusception on which sufficient stress is not laid.

First of importance in connection with appendicitis in childhood is the age; and it is useful to remember that this affection is rare under five years, and practically unknown in the first two years of life.

Secondly, there is a possibility, the recent experience of which leads me to emphasise—namely, the occurrence of thread-worms in the appendix simulating appendicitis. I recently diagnosticated appendicitis in a girl of six years—a case in which the symptoms were of short duration, but not severe. It was, to a certain extent, an acute case, judging alone by the pain and sudden onset. After operation thread-worms were found in the appendix. Allen, of New York, has lately reported two cases, and, as he rightly observes, no gross lesions are found in the appendix, the pain being due to spasm from the irritation of the worms.

The other observations to be made in appendicitis in children are the sudden onset, the rapid progression, and the great gravity of the disease. These characteristics are accounted for by the relative length of the appendix, the short meso-appendix, the poor blood supply, and the large amount of lymphoid tissue. The omentum is relatively small and less effective in walling in the disease.

In dealing with intussusception, eminently a malady of childhood or infancy, the two points of greatest interest are blood in the evacuations and the question of pain.

Blood is practically always present, and with symptoms of intestinal obstruction should settle the diagnosis. This is only reasonable when one considers that the haemor-

rhage comes, and must come, from the venous congestion of the mucous membrane of the invaginated cylinder.

There is one characteristic of pain, a classic symptom of intussusception, and that is the comparative ease which is experienced between acute exacerbations. The child, during these periods, often sleeps and looks the picture of health and comfort. This may seriously disturb the apparent justice of the diagnosis, and quite wrongly.

I have endeavoured to deal with most of the symptoms of two conditions which have only lately assumed positions of importance and widespread recognition amongst the maladies of childhood, and to touch a few characteristics in early life of appendicitis, intussusception, and vesical calculus, with the hope in the one case of elucidating what might appear obscure, and in the other of facilitating early diagnosis and early treatment.

ART. XIII.—*Chorea and its Treatment.*[a] By S. F. A. CHARLES, M.D., M.B., B.A. (Senior Moderator) Univ. Dubl.; House Surgeon (late House Physician), County Hospital, York.

FROM the earliest times chorea has been a constant companion to the physician. During the middle ages his services were not always sought, but more often a pilgrimage to the shrine of St. Vitus, where the cure was miraculous. This custom has earned for the complaint the immortal name, "St. Vitus's Dance." We in this twentieth century, having lost the gift of performing miracles, find it necessary to invoke other deities—namely, those of scientific and sound reasoning.

In the first place, the hysterical chorea, so common when the shrine of St. Vitus held sway, is quite different from that type of acute chorea to which the following remarks apply, and which is usually spoken of as "Sydenham's chorea." Here we have a condition characterised

[a] A Thesis read for the Degree of Doctor of Medicine in the University of Dublin, July, 1911.

with involuntary, irregular, purposeless movements associated with psychic phenomena, and without loss of consciousness. The muscular contractions resemble in a great degree the normal; they are quite unlike the persistent ones of tetanus, or the quick and jerky actions of convulsions. The movements usually subside during sleep; occasionally in severe cases even sleep does not subdue them.

Such a condition as this, with many and varied physical manifestations, must have an interesting pathology, and, indeed, we find that it is only within recent years the true nature of the disease has been discovered. From being regarded as a functional disease after the manner of hysteria, we now look upon it as a true organic condition, having the chief pathological change in the cells of the cerebral cortex. Here we find a universal chromatolysis; hardly a healthy cell can be found, so that one may assume that not only the motor cells are damaged, but also those higher cells which stimulate all voluntary movement—in fact, the law of dissolution is well exemplified. The more highly specialised cell succumbs first to the intoxication of the system, giving rise to the inability to control emotion—the first clinical symptom in chorea. In the later stages of the disease, when there is a universal dissolution of the motor cells, movements that are involuntary dominate the picture until the patient, tossing ceaselessly, appears to have solved the problem of perpetual motion.

I have mentioned that chorea is due to an intoxication of the system. This assumption is now a recognised fact, for has not every one observed the frequent occurrence of choreiform movements, arising during some acute general infection, such as may take place in the course of streptococcal or staphylococcal poisoning? The close analogy between chorea and rheumatic infection has long since been recognised. The frequent recurrence of chorea in the same individual, and the occasional development of joint trouble during an attack of acute chorea, indicate, to my mind, a general infection.

The almost constant association of these two conditions—that is, chorea and rheumatism—has led many observers to believe that chorea is a rheumatic manifestation, due to a general infection of the whole system with the toxins of rheumatism. However, I am inclined to think that the toxins in each case are different, but that a rheumatic diathesis is conducive to an attack of chorea.

Now, let us examine this point, and see upon what evidence such an important statement is made. In the first instance, it is well known that the brain having recovered, even after the most protracted case of chorea, fails to show any trace of permanent injury. In other words, the toxins which give rise to such serious cardiac lesions and joint conditions are lenient to the highly sensitive and special cells composing the brain. Is such a proposition tenable? Secondly, MacAlister, in his evidence, shows the plasma in each case to react differently to normal leucocytes. Again, in a case I shall afterwards bring to your notice, the joint trouble in a case of acute chorea subsided under salicylates, while the choreiform movements increased, showing definitely that they react differently to that well-known rheumatic specific, and consequently must be of different composition. Besides, acute rheumatism is not in any way relieved by the administration of trional, and as I shall show you, this soporific is by far the most beneficial drug we possess for an attack of chorea.

These points fully convince me of the difference of the toxins in the two conditions, but the close clinical connection in a large majority of cases indicate a rheumatic diathesis as conducive to an attack of chorea stimulated into activity by some of those well-known exciting causes, fright, &c., upsetting the nervous stability of the individual.

Having now considered the pathology and ætiology of the condition, allow me to deal with the symptoms and treatment of the disease. The symptomatology, for convenience, may be divided into motor, sensory, reflex, and psychical phenomena.

Under the heading of motor come those involuntary muscular contractions which I have already described. They are first noticed more especially in some one part of the body, as the face, the shoulders, or the hands, the patient making grimaces, shrugging the shoulders, or incessantly working the fingers, and, perhaps, incurring blame for behaving rudely or acting absurdly, as if the motions were voluntary. These irregular muscular actions increase, and at length the whole body becomes involved—head, trunk, and extremities are in an almost constant motion. The features undergo various whimsical distortions, as if the patient was making faces for the amusement of spectators. The head is moved grotesquely from side to side. The limbs gesticulate wildly, and the muscles of the trunk pull the body one way, now another, even sometimes tossing the patient from the bed. The muscles of mastication are usually involved, giving rise to an ulcerative condition of the tongue. The way in which that organ is protruded may be regarded as almost characteristic. It is rapidly and forcibly ejected from the mouth, appearing as if thrust out. Its withdrawal is usually equally sudden, sometimes more slowly as if supported by the teeth. Dysphagia, or difficulty in swallowing, may occur, arising from want of co-ordination in the pharyngeal muscle, and loss of full controlling power over the tongue. Often during convalescence paralysis may come on, usually of a mono- or hemi-plegic type. These include the main motor phenomena, and are by far the more important.

Amongst the sensory symptoms we sometimes have an anæsthesia of some part of the body. The occasional occurrence of the plantar extensor reflex indicative of an upper motor neuron lesion is of special significance, as it is another step to show that the condition is an organic disease.

The condition of the reflexes gives rise to conflicting testimony, some holding that they are increased, others maintaining that they are diminished. Doubtless the incontinence of urine which sometimes occurs is due either

to exalted reflex action or to increased intra-abdominal tension consequent upon the contractions of the abdominal muscles.

The psychical manifestations comprise some of the first symptoms, mainly lack of emotional control shown by fits of crying and sometimes undue mirth. The temper is usually excitable, capricious, or more apprehensive than in health; in fact, the patient evinces various nervous disorders not unlike those attendant upon hysteria.

These, then, are briefly the symptoms of chorea, and it is now our duty to examine the treatment of the condition, which, as I have already mentioned, is a diseased neuron due to a toxic condition of the system. Keeping this before one, the indications to the physician are very obvious. In the first place, treat the diseased neuron by rest, restrain your patient in bed, and, if thought necessary to exclude all superfluous sensory stimuli, isolate the individual. Secondly, control the movements with the free use of trional, thereby producing both mental and physical rest. Thirdly, improve the general health with tonics and a good nutritious diet, from which tea and coffee are excluded.

The sedative drug I strongly recommend is trional, the value of which in chorea has not been universally recognised. It is most efficient in controlling the movements, producing sleep, and in affecting a rapid cure in the great majority of cases. In other words, it acts in chorea as a conservative agent adapted for the needs of the condition. We are all aware that the most beneficial crisis in pneumonia is that by sleep, so, indeed, one may say the same here, the restoring agency of sleep being a great boon to a weakened constitution. Many skilled observers advocate the free use of the salicylate compounds, aspirin, &c. Their depressing action must condemn them, lowering the vitality of the individual and increasing the susceptibility to the toxins circulating in the system. In contradiction to trional, they are not conservative drugs. However, those who advocate the rheumatic origin of chorea are, no

doubt, conscientious in their administration. Let them reflect and consider the lowering effect of the drugs they employ when we have an efficacious remedy without any depressing action.

These are strong words to use in recommending any drug, but I am justified both from results obtained and from the earnest conviction that depressing drugs in chorea are harmful.

Allow me to claim your indulgence a little longer, and recount to you one or two of my favourable results :—

A. F., aged fourteen, female, was admitted to hospital for chorea following, as far as I can determine, acute rheumatism. The chorea was most obvious, and a mitral murmur was present. At first she was put on a mixture of arsenic. However, as the movements continued to increase in severity and the temperature had gone up, accompanied with pain and swelling in some of the joints, salicylate of sodium was added to the prescription. There was a fall in temperature, and joint trouble subsided, but the choreiform movements increased. This I have already mentioned in advancing that the toxins of acute rheumatism and chorea are different. For, if they were the same, why did the joint trouble subside under the salicylate and the chorea increase? This can be explained only by the fact that the toxins are different, and that salicylate, the specific for one, is of no avail for the other. To continue: as I have already mentioned, the choreiform movements increased until it was with difficulty the patient was restrained in bed. All food was refused by the mouth, the girl being unable to swallow, while the groans and contortions of the patient reminded one of an angry reptile. At this juncture treatment by the free use of trional was begun, and 10 grs. every two hours were ordered, until at least seven hours' continuous sleep was obtained. This was accomplished by taking 150 grs. in forty hours. The drug was then stopped for two days, afterwards continued by giving 10 grs. three times a day. Soon one dose of 10 grs. at night was sufficient to produce sleep, and in six weeks from commencing the trional treatment the patient would persist in taking her discharge perfectly cured. In all, 330 grs. of trional were given.

Here we have a severe case of chorea which illustrates in a most remarkable manner the beneficial effect of trional, and exposes the inefficiency of those other popular but older remedies. No doubt one may maintain that unusual energy was displayed in forcing the drug, but did not the end justify the means, for, as the patient awoke from that lethargic sleep induced by trional, it was seen that the movements had almost entirely abated. Permit me to briefly state another case, chiefly comparing the speed of cure :

W. W., age fourteen, female, second admission, a year ago had the same complaint, and was then detained seventeen weeks in hospital—though as bad this time, was cured in four weeks. The drug used was trional, in contradiction to the older remedies administered during her first attack of a year before.

During convalescence, passive movements and treatment by suggestion are advocated. However, recalling that the neuron requires rest, much display of energy in this direction I feel must be condemned, at least until well towards recovery.

To sum up, one must see that not only has the very conception of chorea been altered, but the old time-honoured treatment of cold douches has been supplanted by more rational means.

DEATH DURING AN EPILEPTIC ATTACK DUE TO FACIAL DECUBITUS.

M. Briand (*La Quinzaine Thérapeutique*, July 10, 1911), at a meeting of the Medico-Legal Society, cited two cases of death which were caused during an epileptic attack, by facial decubitus. The first patient contracted the habit of sleeping with his face on the pillow, into which his face was pressed during the fit. The second patient succumbed in the same way ; the dormitory noticed nothing unusual as the patient was in the habit of drawing the bed clothes over his head in order to exclude the light. The cases have a medico-legal interest in that from the appearance of the bedclothes, the presence of blood and mucus, and the evidence of suffocation, homicide might readily have been suspected.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

RECENT WORKS ON PHYSIOLOGICAL CHEMISTRY.

1. *The Simple Carbohydrates and the Glucosides.* By E. Frankland Armstrong, D.Sc., Ph.D. Longmans, Green & Co. 1910. Pp. 112.

2. *The Fats.* By J. B. Leathes, M.A., M.B., F.R.C.S. Longmans, Green & Co. 1910. Pp. 138.

3. *Alcoholic Fermentation.* By A. Harden, Ph.D. D.Sc., F.R.S. Longmans, Green & Co. 1911. Pp. 128.

4. *The Chemistry of Synthetic Drugs.* By Percy May, B.Sc. (Lond.). Longmans, Green & Co. 1911. Pp. 229.

5. *Pamphlets.*[a]

1. There is nothing "simple" in this monograph except in its title, for it is a highly technical presentation of existing knowledge in regard to a group of chemical bodies which are of primary importance in animal and vegetable physiology. As to animal tissues, glucosamine, or amino-glucose, was the first (1878) well-defined carbohydrate compound isolated from the animal kingdom. In plants, it was long believed that starch was the first demonstrable ternary product of vital activity. But it has been known for some considerable time that this is not so. In all probability, formaldehyde (formol), CH_2O, the simplest carbohydrate, is the first product of assimilation in the plant. The CO_2 absorbed from the air

[a] Chemical Structure and Sympathomimetic Action of Amines.
The Fate of Parahydroxyphenylethylamine in the Organism.
Some Phenolic Derivatives of β-phenylethylamine.
The Action of Tetrahydropapaveroline Hydrochloride.
A Reversed Action of the Vagus on the Mammalian Heart.

is converted into this substance by the conjoint influence of sunlight and chlorophyll. By *condensation*, six molecules of formaldehyde are convertible into a glucose, and this sugar, a soluble, crystalloid, and diffusible body, is quickly transformed, by loss of H_2O, into starch, a colloid and indiffusible body, which serves as a reserve food material. Some authorities, however, hold that cane sugar is the first carbohydrate to arise in photo-synthesis.

The subject-matter of the monograph is distributed under seven chapters—viz., glucoses, the chemical properties of glucose, the hexoses and pentoses, the disaccharides, the relation between configuration and properties, hydrolysis and synthesis, the natural and synthetical glucosides.

A vast amount of recently acquired knowledge is compressed into less than 100 pages, and the contents would be bewildering to any one not acquainted with the teaching afforded by the ordinary text-book of organic chemistry.

To the professed chemist and to the physiological investigator Dr. Armstrong's able summary will prove extremely valuable and time-saving, and fuller inquiry is invited by an extensive and classified bibliographical list of text-books and original papers. It is greatly to be desired that chemists and physiologists would come to an abiding agreement as to the nomenclature of the carbohydrates, and so get rid of the awkwardness and confusion of sometimes using the termination "ide," and sometimes "ose," for generic names of groups.

A few items culled here and there from its pages will illustrate the above remarks.

Thus, we learn that galactose (cerebrose, Thudichum) is the special sugar of the brain. Pentoses are widely distributed in the vegetable kingdom, while in the animal kingdom they form an important constituent of the nucleoproteins and nucleic acids. Galactose, an isomer of glucose, is not found in the urine. Injection of glucose into the blood causes lactosuria when the mammary glands are in full activity, but produces glucosuria where the glands are less active. Nothing is known as to the mechanism whereby the mammary glands are able to transform glucose

into lactose, but it is undoubtedly effected by means of enzymes.

2. The aim of this monograph is two-fold. It seeks to attract pure chemists who may be versed in the chemistry of fats, to their biological aspects, and, on the other hand, to show physiologists how far the chemistry of the fats has been advanced by technical scientific chemists. By far the larger part of the book is devoted to a careful description of the chemical and physical properties of fats, and only eighteen pages are allotted to the important and difficult subject of the physiology of fats. This latter section is discussed under three heads:—

(*a*) The biochemical synthesis of fats and higher fatty acids;

(*b*) The physiological oxidation of fats;

(*c*) The rôle of fats in vital phenomena.

As is well known, fats are of prime importance as a reserve fund of fuel for growing and working cells, and they are stored in a light and yet compact form. Thus, the storage of 100 calories in the form of fat may be effected in the space of about 12cc., in tissue weighing about 11 grm.

On the other hand, the storage of 100 calories as glycogen is never effected in less than ten times that bulk of liver tissue, weighing 130 grm., and, probably, rarely in less than twenty times the bulk.

Moreover, facts are gradually coming to light which show that fats may be capable of setting up biological reactions such as previously were ascribed only to proteins, and, further, that they have important relations to certain questions of induced immunity—*e.g.*, the production of hæmolysin.

The chemical nomenclature of fats still leaves much to be desired, and Dr. Leathes has, we regret to find, introduced a set of new-fangled terms which do not appear to us to be either needful or likely to come into general use. Such premature innovations are to be deprecated.

3. This book is based upon courses of Lectures delivered at the London University and the Royal Institution during

1909–10, and gives an excellent general survey of a complex subject to which Dr. Harden has made important contributions.

The phenomena of fermentation have been known to man from the earliest recorded times, and no date can be assigned to the first observation of this process. The modern study of the problem starts from the data provided by the genius and insight of Lavoisier towards the close of the eighteenth century.

The notion that living organisms had anything to do with the process although supported by a number of distinguished men (Cagniard–Latour, Schwann, Kützing) in the early years of the nineteenth century was laughed to scorn by Berzelius, Wöhler, and Liebig, the then leaders of chemical science, who met arguments and experiments by sarcasm and ridicule. Every one now knows how Pasteur (1857, *seq.*) settled the question, and proved that fermentation is a physiological process linked with the life of the yeast plant. Historically, the next significant step was made by Buchner (1897), who incontrovertibly established that fermentation was due to ferments (enzymes) produced by living organisms, and he succeeded, where Pasteur failed, in preparing from yeast a liquid (zymase) which, in the complete absence of cells, was capable of effecting the resolution of sugar into CO_2 and alcohol. Buchner's epoch-making discovery lies at the root of all recent experimental work in fermentation, and it has, further, been found that the machinery of fermentation is much more complex than had been surmised.

It is unnecessary to analyse Dr. Harden's monograph in detail, suffice it to say that it is a masterly exposition of a subject of the highest importance in biology, and will be welcomed by all physiologists and by all chemists who have to deal with the problems of fermentation.

4. This is by no means a book for babes in Medicine. It is, in truth, a condensed epitome of advanced organic chemistry in relation to modern synthetic drugs, and it bristles with portentous graphical formulæ.

Interwoven with the pure chemistry is a concise account of the physiological and therapeutical relations of the different

substances, and the whole is presented in as lucid a form as the subject-matter admits.

Running through the book we notice reiterated reference to the attractive, if obscure, topic of the dependence of physiological action upon chemical character and constitution. While we recognise that a large number of interesting individual facts are known it is plain that it is at present premature to generalise, and difficulties and exceptions confront every such attempt.

The drugs referred to are arranged under groups—*e.g.*, Narcotics and general anæsthetics; antipyretics and analgesics; alkaloids; antiseptics; purin derivatives; purgatives.

Chapter XIV., on arsenic and antimony compounds, appeals strongly to our attention just now, and a full account is given of the curious organic arsenic compounds—*e.g.*, atoxyl, and 606 (salvarsan), which have become so famous in the treatment of protozoan diseases—*e.g.*, syphilis and trypanosomiasis.

In this connection a suggestive remark by Cushny may be quoted. He points out that a greater measure of success may be hoped for in the case of those diseases which are caused by protozoa rather than by bacteria. The latter are probably among the oldest living organisms, and have probably acquired a high degree of resistance. The former do not appear to have been able to adapt themselves so successfully to their environment, and the diseases they give rise to are very likely of more recent date than those caused by bacteria.

The book is a valuable addition to the library of every pharmacologist and teacher of Materia Medica, and is written by an expert hand.

5. We are favoured with a number of reprints of papers illustrative of the scientific work carried on in The Wellcome Physiological Research Laboratories by various investigators. They are of a highly technical character, and would not be easily intelligible except to those skilled in organic chemistry.

The most interesting one is a Chart Presentation of recent work on Indicators by Mr. G. S. Walpole. The chart illustrates the relation between the compositions of certain mixtures, the logarithms of their hydrogen ion concentration and the related colour changes of certain indicators.

The hydrogen ion concentration is expressed in terms of the normal hydrogen solution—*i.e.*, 1 gram per litre.

On Diseases of the Lungs and Pleuræ, including Tuberculosis and Mediastinal Growths. By Sir R. Douglas Powell, Bart., K.C.V.O., M.D. Lond., F.R.C.P., Hon. D.Sc. Oxon., M.D. Dublin, F.R.C.P.I., LL.D. Aberd. and Birm., Physician-in-Ordinary to H. M. the King, &c., &c.; and P. Horton-Smith Hartley, M.V.O., M.A., M.D. Cantab., F.R.C.P., late Fellow of St. John's College, Cambridge, &c., &c. Fifth Edition. London: H. K. Lewis. 1911. Demy 8vo. Pp. xxviii + 712. With 29 Plates, 6 in colours.

Eighteen years have passed since the publication of the fourth edition of Sir Douglas Powell's well-known work on "Diseases of the Lungs and Pleuræ." In their preface the authors tell us that well nigh ten years have been spent in the production of the present edition, which is practically a new work written in the light of another eighteen years' experience, due, but not undue, regard having been paid to contemporary literature of diseases of the chest, and modern methods of preventive and curative treatment. In a word, the book retains its original charm as a clinical treatise, based on personal observations at the bedside of the sick. This feature is its great charm, and to it the work owes its undoubted success.

We can thoroughly endorse the statement in the preface to the present edition that serum treatment of acute disease has steadily lost ground of late years, and, except in the case of diphtheria, and perhaps tetanus, has now almost entirely given place to the use of vaccines. With regard to tuberculin, the authors have decided, on due consideration, and after consultation with Mr. Peter

W. Squire, to follow the modern German system, and to prescribe the remedy by measure only, in cubic centimetres and fractions of the same.

To show the valuable clinical character of this work we may refer to certain observations in the chapter (VII.) on serofibrinous and hæmorrhagic pleurisy. Having described Grocco's sign of pleural effusion—the so-called *paravertebral triangle of dulness* situated posteriorly at the base of the healthy lung—the authors state that it is not always present, and add that "a similar area of dulness has been observed in certain cases of pneumonia." This statement we can corroborate from personal observation, and we entirely agree in the remark that "it is not possible as yet to gauge its value as a means of diagnosis, but it appears to us to have been over-estimated." (Page 99.)

Again, when describing, in Chapter VIII., the physical signs of suppurative pleurisy, and particularly Professor Baccelli's sign, *pectoriloquie aphonique*, the authors write :—"Experience, however, shows that, although of some use as an additional sign, this sign does not possess the crucial value attributed to it by its distinguished advocate. Pectoriloquie aphonique is heard in perfection in some cases of pure sero-fibrinous effusion, but we have also heard it very well marked in certain cases of purulent pleurisy, and perfectly in cases of fœtid sero-purulent effusion."

The common-sense views of the authors on debatable matters may be illustrated by their comments on the theory as to the influence of high winds on the prevalence and fatality of phthisis first put forward by the late Mr. Alfred Haviland many years ago, and more recently advocated most energetically by Dr. William Gordon, of Exeter. The authors consider that "the matter is very difficult to prove statistically, so many other factors having to be weighed and discounted. The ill-effects of winds may be due to their direct depressing action, but perhaps more largely to the closing of doors and windows to which their violence often leads." (Page 384.)

A very interesting chapter is that (XXV.) on streptotrichosis, or actinomycosis, of the lung and pleura. Like the rest of the work, it is splendidly illustrated. The second case of the disease reported in this chapter is that of a lady, aged forty-five, who had suffered from epileptic attacks, and who was seen by Sir R. Douglas Powell in consultation with the lady's friend and family attendant, Dr. Waithman, in April, 1903, on account of a severe pain of a neuralgic character in the right shoulder and radiating therefrom. Some impairment of the percussion note was observed below and over the right clavicle, the breath-sounds were harsh and wavy, and a few râles were heard. But, on making the patient sit up, and passing the hand over the supraspinous region on this side attention was at once attracted to a fulness, and on pressure considerable tenderness was elicited. A sense of elastic tension was appreciable, but no distinct fluctuation. Mr. Godlee made an incision between the superior angle of the scapula and the spinal column, passing deeply through the several layers of muscles, until finally some purulent matter welled forth, which on examination revealed the characteristic canary-coloured grains of actinomycosis.

The subsequent treatment by iodide of potassium, by operation, and hygienically on fresh-air lines, was continued for some two years. The wounds finally healed in 1906. The lung signs cleared up, and, except for occasional epileptic seizures, the lady has since remained in good health.

Enough has been mentioned to show the high estimation in which we hold this excellent, scientific and practical treatise on "Diseases of the Lungs and Pleuræ." It is a classical work, well fitted to rank with Stokes on "Diseases of the Heart and Aorta," Murchison on "Diseases of the Liver," and Bright on "Diseases of the Kidneys."

In conclusion, allusion should be made to an Appendix, in which more detailed meteorological data, relating to certain of the climatic stations referred to in the text, have been thrown into shape by Mr. W. J. Marriott, of the

Royal Meteorological Society; and also to the extremely full index which Mr. Archibald L. Clarke has, with infinite pains, prepared for the work.

Quinquennium of Medicine and Surgery: 1906 to 1910. Edited by J. W. Ballantyne, M.D., F.R.C.P.E. Edinburgh: William Green & Sons. 1911. Royal 8vo. Pp. 411.

In an "Editorial Note" prefixed to the tenth and final volume of "Green's Encyclopædia and Dictionary of Medicine and Surgery," published at the close of 1908 or the beginning of 1909, the editor, Dr. J. W. Ballantyne, of Edinburgh, expressed the hope that a supplementary volume to the "Encyclopædia Medica" and to "Green's Encyclopedia," which was a second and revised edition of the former work, would be published within five years after the date (1904) on the title-page of the Index Volume of the "Encyclopædia Medica." Such a supplementary volume would then be correctly designated a "Quinquennium of Medicine and Surgery."

The editor's expectations were not realised for reasons over which he, doubtless, had no control, and it is only now (in the summer of 1911) that the "Quinquennium of Medicine and Surgery, 1906 to 1910," makes its appearance. The volume, beautifully brought out by Messrs. William Green & Sons, Edinburgh, is replete with valuable information relative to the progress of medicine, surgery, and midwifery during the past quinquennium, or more. The perhaps unconscious influence of the editor, Dr. Ballantyne, is seen in the fulness and multiplicity of the articles bearing upon his specialty. Glancing through the work, we are not likely to forget that the erudite editor is also a Physician to the Edinburgh Royal Maternity and Simpson Memorial Hospital. But this is no drawback to the work, in the pages of which medicine and surgery receive adequate treatment.

One feature of the volume is open to criticism—we

think, to hostile criticism. We refer to the entries relating to proprietary drugs, foods, and apparatus. In both text and index we come across "Albulactin," "Baudon's Wine," "Beecham's Pills" (with the analysis published in the *British Medical Journal*), "Bivo," "Bovril Wine," "Buvo," "Bynin," "Calmine," "Calsa," "Carnabyn," Carnrick's Liquid Peptonoids" (in use, by the way, long before the "Quinquennium" was thought of), "Casoid Bread," and so on through the alphabet, including "Lemco," "Oxo," *et hoc genus omne.*

The articles on "Chauffeur's Fracture," "Eugenics and Eugenism," "Fibrolysin," and so on, show how thoroughly modern the work is. Under the heading "Fractures" we are glad to see posthumous honours paid to Professor Edward H. Bennett, of Dublin, in connection with fracture of the base of the metacarpal bone of the thumb.

The New Physiology in Surgical and General Practice. By A. Rendle Short, M.D., F.R.C.S., Hon. Surgical Registrar, Bristol Royal Infirmary. Bristol: John Wright & Sons. London: Simpkin, Marshall, Hamilton, Kent & Co. 1911.

Much of the new physiology in this readable little book is new in the sense that it was not contained in the text-books that some of us read in our student days. Some of it—for example, that on the pituitary gland—is hardly new enough. Nevertheless, the book will be read with interest and profit by numerous practitioners who find a difficulty in keeping abreast with modern discoveries. The author has the power of presenting his facts in a pleasing and easily assimilable form, and groups together the more important practical discoveries of modern physiology in comparatively small compass, and in every-day language. The up-to-date surgeon will find in the book nothing with which he is not already familiar. The subjects dealt with are the thyroid and parathyroid glands, the pituitary gland, the physiology of digestion, including the changes observed after the opera-

tion of gastro-enterostomy, the clinical importance of blood-pressure observations, acidosis, localisation of nervous lesions, and the physiology of uric acid and other urinary deposits. There is also a chapter on the hæmorrhagic diathesis, and one on the action of cutaneous anæsthetics.

The Human Atmosphere, or the Aura made Visible by Chemical Screens. By WALTER J. KILNER, B.A., M.B. Cantab., M.R.C.P., Late Electrician at St. Thomas' Hospital, London. London: Rebman, Ltd. 8vo. Pp. xiii + 329. (With Accompanying Screens and Diagnosis Sheets. Thirty Shillings net.)

THE most incomprehensible thing about this amazing book is how it could ever have been written by one who from the title page appears to have had a scientific training, and to be a medical graduate of Cambridge University.

The author states (p. 3):—"There cannot be the smallest doubt as to the reality of the existence of an aura enveloping human beings, and this will be in a short time an universal accepted fact, now that it can be made visible to any one possessing normal eyesight, . . . and we firmly believe that a study of its modifications will show that they will have a diagnostic value." If this be so, surely the most obvious duty of the author is to cite the evidence of trustworthy witnesses, who, under his direction and using his screens, have seen this aura. But not a single witness is adduced. On the contrary, the author fills his book, not with evidence or the conditions and precautions necessary in order to witness the aura, but with outline diagrams of nude figures of men and women, having dotted lines of varying widths around their bodies indicating the differences in the aura which the author asserts he has perceived. The book is accompanied by a series of "Diagnosis Sheets" for the use of the profession, and a box containing the coloured screens. These latter consist of four thin cells containing coloured liquids, two being blue and two pink, and are very nicely got up.

The author tells us if we place the patient in a partly darkened room, and the observer, standing back to the

window, looks first at the light through one of the coloured screens and then at the patient through a lighter coloured screen, he will see at once, or after a few seconds, "a faint cloud enveloping the patient, which varies in health according to individual peculiarities." Very few directions are given, but we are told "the light must not be too bright," and immediately after that "a rough estimate is that the body can just be seen distinctly after the observer has become accustomed to the dulness," which means almost complete darkness."

The aura, we are told, is about four or five inches in width, and envelopes the head, trunk and limbs. When examined carefully it is divisible into three parts—first, "a narrow transparent portion appearing as a dark space . . . when visible it looks like a dark band, not exceeding a quarter of an inch, surrounding and adjacent to the body, without any alteration in size at any part. This will be called the *Ethenic Double.*" Then, we are told, there is a second aura just outside the first, and a third wider aura, variable in size, outside the second. Besides this there are three groups of rays proceeding from the body, more especially from the tips of the fingers, and which may be deflected under certain circumstances; or, if another hand be held near and moved about, the rays stream in straight lines towards it. Then it is asserted that the nervous system induces alterations in the aura, and that the "auric stream issuing from the tips of the fingers can be either elongated or contracted according to the will of the owner," and further, that the colour of the aura can be changed by an effort of will.

All these amazing statements are given on the *ipse dixit* of the author without any corroborative evidence. Dr. Kilner appears to be satisfied that any one buying his book and coloured screens can verify his assertions. Well, we have attempted to do so, following the scanty directions given by the author, and have failed to see any trace of this aura. Nor have others whom we have asked to repeat the experiments been any more successful. From the drawings given by Dr. Kilner and certain remarks in the text it would appear that the patient must be nude, but no mention of this is given

in his directions. Though the subjects we have tried were decently clothed, yet no aura was seen on the bare head and shoulders or bare arms and hands.

Reichenbach, as is well-known, sixty to seventy years ago, stated that certain "sensitives" could see an aura or lummosity around the poles of magnets and proceeding from crystals and from the finger tips of different persons. But the sensitives were rare, and complete immersion in absolute darkness for an hour or more was necessary. Though Reichenbach, who was a distinguished scientific man, gave corroborative evidence of his assertions, the scientific world has never accepted his statements of the "od" force, as he termed it. How then can Dr. Kilner expect even a hearing when he falls so far short of Reichenbach?

There is nothing *à priori* inconceivable in the existence of an aura round human beings, such as most theosophists believe, but its existence can be established only by the unimpeachable evidence of numerous trained scientific observers, and this essential fact Dr. Kilner completely ignores.

The Practice of Medicine. By FREDERICK TAYLOR, M.D., F.R.C.P.; Consulting Physician to Guy's Hospital; Consulting Physician to the Evelina Hospital for Sick Children; Physician to the Seamen's Hospital, Greenwich; Examiner in Medicine at the University of Cambridge and at the Queen's University, Belfast; late Examiner in Medicine at the Universities of London, of Durham, and of Birmingham, and to the Royal College of Physicians, London. Ninth Edition. London: J. & A. Churchill. 1911. Demy 8vo. Pp. xvi + 1121.

ONLY three years have elapsed since the previous edition of this popular text-book appeared—a fact which testifies to the estimation in which it is held by the medical profession and by teachers.

The present, the ninth, edition has undergone a thorough revision at the author's hands. In the introduction he gives a brief account of various methods of treat-

ment under the headings—Diet, Drugs, Organo-therapy, Antitoxic and Antibacterial Sera (Serums?), Bacterial Vaccines, and "the forces of Nature"—namely, heat, light, X-rays, radium, electricity—also Baths and Douches, Massage, Swedish Movements, Nauheim Treatment, Regulated Exercise, Frenkel's Movements.

Several new subjects are described, such as pellagra, meralgia paræsthetica, pneumococcal meningitis, myotonia atrophica, amyotonia congenita, enterospasm, Hirschsprung's Disease or chronic dilatation and hypertrophy of the colon, intermittent claudication, congenital family cholæmia, peritoneal adhesions, lymphatism, bacilluria, and pneumaturia—the last, a rare condition in which gas is formed in the urine, no doubt as a result of fermentation, in diabetes mellitus and in cystitis.

Many alterations and additions have been made in other directions throughout the book, and the illustrations in the text have been increased in number to sixty-seven. There are, besides, eight plates of skiagrams.

In respect to new methods of treatment, Dr. Taylor writes cautiously. For example, while admitting that "remarkable results have undoubtedly been obtained in the rapid healing of syphilitic lesions" by subcutaneous injection of the Ehrlich-Hata arsenical compound, he adds (page 145):—"The frequency of relapses and of toxic effects, which may certainly be fatal, have yet to be learned." By the way, at page 41, he countenances the use of this remedy in relapsing fever, which, in common with all other diseases due to spirilla, is stated to be at once arrested by hypodermic injections of the sodium salt of "606" in doses of from .2 to .3 gramme into muscle or vein.

With pardonable pride, the author informs us in his preface that a third edition of the Italian translation of his work by Dr. Luigi Ferrio, of Turin, is in course of publication in two volumes, and the first volume has already appeared.

As in 1908, so in 1911, we have much pleasure in recommending Dr. Taylor's "Practice of Medicine" as

everything that a student's text-book should be. Medical practitioners also will find it a valuable aid to their clinical studies and practice.

A System of Medicine. By Many Writers. Edited by SIR CLIFFORD ALLBUTT, K.C.B., M.A., M.D., LL.D., D.Sc., F.R.C.P., F.R.S., F.L.S., F.S.A., Regius Professor of Physic in the University of Cambridge, Fellow of Gonville and Caius College; and HUMPHRY DAVY ROLLESTON, M.A., M.D., F.R.C.P., Senior Physician, St. George's Hospital; Physician to the Victoria Hospital for Children; sometime Fellow of St. John's College, Cambridge. Volume IX. Diseases of the Skin. General Index. London: Macmillan & Co. 1911. Medium 8vo. Pp. xvi. + 869.

THE "Many Writers" in this, the closing volume of the second edition of the *System of Medicine*, include several of the leading dermatologists of England—we say advisedly England, for no representative of either Ireland, Scotland or Wales is to be found in the "List of Contributors," unless we in Ireland still claim Dr. Phineas S. Abraham as a fellow-countryman. We think this exclusiveness is to be regretted, having in our mind's eye the names of some well-known authorities on skin diseases whose lot has been cast in parts of the United Kingdom lying outside the "English Pale."

However, apart from this preliminary grumble, we have nothing but praise for the contents of this dermatological volume, which is a great improvement on the arrangement of "Diseases of the Skin" in the first edition.

Dr. T. Colcott Fox, of the Westminster Hospital, plays a prominent part in the authorship of this volume. He has not only re-written most of the articles contributed to the first edition by the late Dr. J. F. Payne, of Oxford, but he is the author of no fewer than eighteen sections in the present volume, including monographs on the dermatoses of streptococcic and staphylococcic origin respectively. Important articles on "Bacteriology of the Skin," "Eczema," and "Tumours" have been re-written by Dr. Arthur Whitfield, of King's College Hospital. Dr. H. G. Adamson, of St.

Bartholomew's Hospital, contributes new articles on "Generalised Exfoliative Dermatitis," "Pityriasis rosea," "Pityriasis rubra pilaris," "Blastomycosis," "Sporotrichosis," "Calcareous Deposits in the Skin," and "Diseases of the Nails." Dr. J. H. Sequiera has completely re-written the monograph on "Tuberculosis of the Skin" (pages 466 to 505), and Dr. J. M. H. MacLeod contributes new articles on "Pruritus" and the "Parapsoriasis" of Brocq (*Annales de dermatologie et syphilographie*, Paris, 1902, 4 S. iii, 313, 433), or "Resistant Scaly Erythrodermias."

The account of "Xerodermia Pigmentosa" (Kaposi's Disease) by the late much lamented Dr. H. Radcliffe Crocker, has been revised by Dr. A. Whitfield.

In our opinion, the illustrations, numerous though they are, constitute a distinctly weak point in this volume of the *System of Medicine*. Most of them are on too small a scale to demonstrate satisfactorily the features of the morbid conditions they portray. Again, skin diseases require coloured drawings if justice is to be done to the descriptions in the text. There are, it is true, two coloured plates. The first illustrates infection of the hair by microsporons and trichophytons; the second presents an indifferent portrait of impetigo pityrodes and two other figures—one showing a "pityriatiform" eruption of uncertain nature, the other, pityriasis of the scalp, face, neck, body, and limbs in a girl aged ten years. Dr. Colcott Fox seems to be responsible for the remarkable expressions "eczematised" "pityriatiform eruption of uncertain nature," as runs the legend under Fig. 2 of Plate II. At page 294, "eczematisation" is defined as a condition resulting from a process whereby "in some people a papulo-vesicular eruption is produced by rubbing, which tends to weep, become crusted, and to assume the characteristics of eczema." Unna uses the term in connection with an infiltration of cells round the blood-vessels of the superficial layers of the skin in early psoriasis.

There is a very full index to the volume itself, while a "General Index" occupying 98 pages brings the whole work to a fitting close. This index, we are told, is not so exhaustive as the indices of the eleven volumes of the *System of Medicine*, and in many instances the reader is referred

for details to the index of the individual volume in which the special article may be found, for example:—"Aorta, diseases of the, VI., *Index*."

It only remains for us to offer our hearty congratulations to Sir Clifford Allbutt and Dr. H. D. Rolleston on the successful completion of their editorial labours in connection with the publication of the second edition of the far-famed *System of Medicine*.

The Dublin University Calendar for the Year 1911–1912. Vol. I. Dublin: Hodges, Figgis & Co. 8vo. Pp. viii. + 61* + 508.

PUNCTUALLY, with the opening of Michaelmas Term, the first volume of the Dublin University Calendar for 1911–1912 makes its appearance. In its pages, as usual, will be found full information as to the Ordinary and Honour Courses in Arts and in the Professional Schools. The papers set at the Ordinary Examinations during the past Academic Year, 1910–1911, are also printed in full.

Under the heading "Library of Trinity College" is given a long list of the presentations made to this magnificent collection between July 1, 1910, and June, 30, 1911. The number of volumes contained in the Library (including MSS.) is now 323,423, compared with 218,241, so recently as 1889. This fact speaks well for the popularity of the Library and the energy and enterprise of the veteran Librarian—the Rev. Thomas Kingsmill Abbott, B.D., Litt.D.—and his assistants and staff.

But the most novel and probably the most interesting feature in this issue of the University Calendar is the new King's Letter ("Letters Patent 1 George V., 24th May, A.D. 1911," is the official and—it will be observed—inaccurate heading), the full text of which is printed at pages 328 to 356 inclusive. The "Letters Patent" close with the sentence "Given at Our Court at St. James's the 24th day of May, 1911, in the First year of Our Reign." As the accession of King George V. took place on May 6, 1910, it is clear that May 24, 1911, was in the second—not the first—year of his reign.

PART III.

SPECIAL REPORTS.

REPORT ON MEDICINE.

By T. Gillman Moorhead, M.D., F.R.C.P.I., Physician to the Royal City of Dublin Hospital.

I. TUBERCULIN FOR SO-CALLED TUBERCULOUS GLANDS.

Waugh has carefully considered the value of tuberculin injections as a treatment for so-called tuberculous glands in 191 cases that have been under his care. He formulates the following conclusions :—1. The use of Wright's bacillary emulsion in doses from $\frac{1}{5000}$ to $\frac{1}{5}$ mg. has not yet proved to be of any value. 2. Judging by the absence of marked constitutional or local disturbance, the injection of bacillary emulsion in these doses is harmless, and may be accorded a more extensive trial. 3. The most important factor in the treatment of chronic glandular enlargement with a view to the avoidance of extensive operative interference is the complete elimination of all primary foci of infection. 4. No proof that glands are tuberculous can be offered until the glands have been subjected to operation, and, in consequence, an estimate of the value of injections of tuberculines is difficult to arrive at.—*Quarterly Journal of Medicine*. Vol. IV. No. 16. P. 521.

II. CARBOHYDRATE TOLERANCE AND THE PITUITARY BODY.

Goetsch, Cushing, and Jacobson, as a result of careful experiments upon dogs, have come to the conclusion that the secretion of the posterior lobe of the pituitary body is of much importance in carbohydrate metabolism. They

find that this secretion is poured into the cavity of the third ventricle, and becomes dissolved in the cerebrospinal fluid. When the posterior lobe is interfered with, a transitory hyperglycæmia is produced, presumably due to the setting free of an excess of secretion, which causes the discharge of stored glycogen. For a few days subsequently the assimilation limit for ingested carbohydrates is diminished, but if the operation has created a permanent insufficiency of posterior lobe secretion an abnormal and permanent augmentation of the tolerance for sugars succeeds. This increased power for the assimilation of carbohydrates can be lowered by the intravenous injection of posterior lobe extract. Accompanying the increased tolerance for carbohydrates there is a tendency to adiposity with subnormal temperature, while repeated injections of pituitary extract, on the other hand, lead to emaciation. These experiments point to the existence of antagonistic physiological action between the pituitary body and the pancreas. The internal secretion of the pancreas enables the tissues to metabolise carbohydrates, while the internal secretion of the posterior lobe of the pituitary body apparently deprives the tissues of that power.—*Bulletin of Johns Hopkins Hospital.* June, 1911. Vol. XXII. P. 165.

III. TREATMENT OF TUBERCULOSIS BY RADIO-ACTIVE MENTHOL-IODINE.

Bernheim and Dieupart contribute a lengthy article on their experiences with Szendeffy's new remedy for tuberculosis. The remedy is composed of peptonised (?) iodine, menthol, and radium barium chloride, and is administered by intramuscular injection. The exact composition of the drug was apparently arrived at by assuming that if iodine and menthol singly are beneficial in tubercular cases, they must necessarily be more beneficial when combined. Radium, further, is known to exert a deleterious effect on tubercle bacilli, and hence the radium barium chloride was added to the mixture. Two courses of treatment, each consisting of from 30 to 40 daily in-

jections, are necessary. Seventy-five cases have been treated by the present writers and their colleagues, and the conclusion is drawn that the radio-active mentholiodine destroys the Koch bacillus. The grounds for this conclusion are the observed diminution in numbers of the bacilli in the sputum of treated cases. The drug is also stated to destroy streptococci, and incidentally to improve the general health, feeling of vigour, and to increase the weight of patients. Its beneficial effect persists in spite of intercurrent affections, and its action is specially marked in diminishing such symptoms as sweating, cough, and expectoration. It, moreover, relieves accompanying digestive disturbances. Great stress is, however, laid on the fact that it will not cure all cases.—*La Revue Internationale de la Tuberculose.* August, 1911. P. 104.

IV. ABDOMINAL ANGINA.

An interesting article on abdominal angina is contributed by Heisler. The condition is attributed in all cases to vascular changes, which are stated to manifest themselves in four clinical types. The first group consists of cases in which there is actual arterial thrombosis; in the second, the predominant symptom is hæmorrhage from the stomach and intestine, which may prove fatal; the third group consists of those cases in which ulcers of the stomach develop as a result of arterio-sclerosis; while the fourth group embraces cases of true abdominal angina. The pain in these cases may be most marked in the stomach or in the intestine, in the latter case being usually felt over the sigmoid and in the region of the umbilicus. Sometimes the pain directly follows the taking of food, and occasionally it is accompanied by angina pectoris. Intermittent claudication has also been observed as a concomitant symptom. The condition is ascribed to a sudden vascular spasm, and is most frequently observed in middle-aged men, occasionally coming on without apparent cause at night. In treatment, iodides and nitroglycerine have proved most useful in affording relief.—*Russki Wratsch.* 1910. No. 45.

V. ACTION OF COCAÏN AND OF STOVAÏN ON THE CARDIO-VASCULAR SYSTEM.

As experiments upon guinea-pigs have proved unsatisfactory, Kamenzorr has recently investigated the physiological action of cocaïn and stovaïn on dogs. Cocaïn, he finds, excites a pronounced vaso-constrictor effect accompanied by rising blood pressure, and, as a rule, slowing of the pulse. Later tachycardia may occur as a result probably of irritation of the excitomotor apparatus in the heart. Stovaïn, on the other hand, causes vaso-dilatation, with, as a rule, increased rapidity of the pulse and fall in pressure; the fall being specially marked in those animals in which tachycardia does not occur. The writer concludes from the above results that syncope is never to be feared from the administration of stovaïn.—*Archiv. internationale de pharmocodynamie et de thérapie.* 1911. Bd. 21. S. 5.

VI. RADIUM THERAPY FOR SYRINGOMYELIA.

Duhain has treated cases of syringomyelia by means of radium emanations, and has come to the conclusion that the method is of considerable value. Muscular weakness and tactile anæsthesia, he states, soon become lessened, and later on sensibility to pain becomes restored. Restitution of temperature sense usually remains imperfect, but as a rule deep sensibility and the stereognostic sense become improved. Spontaneous pain often persists in spite of the treatment, but vasomotor and trophic disturbances rapidly disappear. Atrophic muscles, however, do not seem to improve.—*Archiv. d'Elect. Méd.* 1911. April 10.

VII. TUMOURS OF THE HEART.

Ehrenberg discusses the pathology and symptomatology of cardiac tumours. The most common varieties are (1) sarcomas taking origin in the large veins and obtruding as polypoid infiltrating masses into the right auricle, and (2) large carcinomatous metastases in

the right ventricle. Sarcomata originating in the blood-vessels are usually found on the right side of the heart, while, on the other hand, those that originate in the cardiac muscle itself are usually found in the left heart. A relatively large number of primary cardiac and vascular sarcomata are of the giant-celled type. Engorgement symptoms, due to obstruction of the veins, are comparatively seldom seen, and would, as a rule, suggest the presence of a growth external to the heart. Occasionally X-ray examination may reveal movements of the right auricular wall of very great amplitude, and may be of use in diagnosis, especially if observed along with the presence of variable tricuspid or pulmonary murmurs.—*Deutsch. Archiv. für klin. Med.* 1911. Bd. 103.

VIII. CHANGES IN THE ARTERIES OF CHILDREN DUE TO INFECTIOUS DISEASE.

Kondratiew, as a result of a large number of microscopical investigations, has come to the conclusion that the walls of the larger blood vessels in children react with extraordinary rapidity to the action of circulating toxins. Changes of an inflammatory character accompanied by small round cell infiltration and tissue destruction occur. The elastic fibres become swollen, and a homogeneous exudate makes its appearance between the elastic and muscular coats. Deposition of calcium salts has also been noted, but no arterio-sclerosis. The most pronounced changes have been noted in scarlatina, septic processes, and congenital syphilis.—*Dissertation.* St. Petersburg. 1910.

IX. TERATOMA OF THE MEDIASTINUM.

Sieber reports a case of a sixteen year old boy who came under observation suffering from extreme dyspnœa. The left half of the thorax was enormously enlarged and dull on percussion. Death took place soon after an attempt to give relief by operation. The *post-mortem* revealed the presence of a tumour which lay in the mediastinum between the heart and left lung, and

which was almost the size of a man's head. Microscopical examination of the tumour proved it to contain tissues derived from each of the blastodermic layers of the embryo, and to be, in consequence, a teratoma. In addition to connective tissue, fat, muscular tissue, nervous tissue, cartilage and bone, traces of epithelial elements in the form of cysts, and glandular organs were found.—*Virchow's Archiv.* Bd. 202, 2.

X. OPERATIVE TREATMENT OF GASTRIC CRISES.

Foerster maintains that in severe cases of gastric crises in which, as a result of inanition and morphinism, life is endangered, and in which other therapeutic measures have failed, an attempt to secure relief should be made by resection of the posterior dorsal nerve roots from the seventh to the tenth inclusive. The author thinks that the gastric crises arise from a painful irritation of the sensory sympathetic gastro-intestinal nerve fibres which reach the cord in the dorsal nerve roots. Altogether twenty-eight cases have been operated on. Of these, three died as a direct result of the operation, and in two cases no benefit was obtained. In the remaining twenty-three there was a prompt cessation of the crises, the weight increased, and the general health improved. In a few cases the crises returned later on. Sometimes paralysis of the bladder, with subsequent cystitis, and temporary intestinal atony with meteorism follow the operation.—*Therapie d. Gegenur.* August, 1911.

CONDITIONS SIMULATING APPENDICITIS.

M. G. Levew (*La Quinzaine Thérapeutique*, July 10, 1911), at a meeting of the Therapeutic Society, drew attention to the following conditions as simulating appendicitis—(1) Hyperæsthesia of the cutaneous surface of the abdomen in dyspeptics; (2) pains associated with the beginning of the menstrual flow; (3) gastric pains occurring in patients with an elongated stomach, the pylorus of which occupies MacBurney's point.

PART IV.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—Sir Charles Ball, M.D., F.R.C.S.I
General Secretary—J. A. Scott, M.D., F.R.C.S.I.

SECTION OF SURGERY.

President—R. H. Woods, P.R.C.S.I.
Sectional Secretary—A. J. Blayney, F.R.C.S.I.

Friday, April 21, 1911.

The President in the Chair.

Case of Acute Pancreatitis followed by Formation of Cyst.

Mr. R. A. Stoney said the case was one of a young married woman, who on admission showed symptoms of biliary colic with slight jaundice, and a moderate rise of temperature. At the operation the gall-bladder and bile ducts appeared normal, but numerous spots of fat necrosis were found, and the pancreas was generally enlarged and hard. A cholecystostomy was done, and the condition of the patient improved. At the end of a week several very small stones, irregular in shape, escaped. After this improvement was rapid, except for a severe attack of vomiting followed by tetany. About six weeks after the operation a swelling was first noticed in the upper left quadrant of the abdomen, and this steadily increased until it reached the size of a football. The patient was apparently in good health; the cholecystostomy opening was almost closed, the urine and fæces were both normal, and there was no elevation of the temperature.

A diagnosis of pancreatic cyst was made, and at the operation a large, tense fluid tumour was found presenting above the lesser curvature of the stomach. The anterior wall of the cyst was formed wholly or in part by the lesser omentum. About two quarts of thin, brown fluid were evacuated, the edges of the incision in the cyst wall were stitched to the abdominal wall, and the cyst was drained. The discharge rapidly lessened, and the patient left hospital, cured, in less than a month. The fluid when examined was found to contain trypsin, amylopsin, and stapsine, and caused some erosion of the skin around the drainage opening. The patient has remained in perfect health since the last operation, which is now more than a year ago.

Mr. Stokes asked was there any use in giving an enema with undigested proteid in it. As far as he knew there was no method of digestion or absorption.

The President said the mechanism by which absorption occurs is by decomposition and splitting up the proteid into substances which are capable of absorption.

Mr. Wheeler said he would like to ask does Mr. Stoney place much reliance on the chemical test for the diagnosis in acute pancreatitis. He found Sahli's test give a positive result in two cases of chronic pancreatitis. Capsules of iodoform are given, the idea being that normally the pancreatic secretion dissolves the capsules and iodine is found in the urine, whereas in bad cases of pancreatitis the capsule is not dissolved and iodine is not found in the urine.

Mr. Pearson said that after very careful experiments the Mayos have come to the conclusion that Cammidge's test is worthless, unreliable, and tedious. He wanted to know why Mr. Stoney drained the gall-bladder at the first operation, as it appeared normal, although the ultimate result justified what he did. The history of the case with the tumour appearing at the epigastrium would have suggested to his mind a subphrenic abscess rather than a pancreatic cyst. He wanted to know the reason for waiting so long in opening the abdomen the first time, considering there were obvious indications for opening sooner. As regards the administration of morphin, he said there were only two indications for its use—(1) when the diagnosis has been made and the patient has consented to operation, and (2) when the patient has refused operation.

Mr. Seton Pringle said he got a positive result in Cammidge's reaction once in six cases—namely, in a case of acute pancreatitis where the whole of the pancreas had sloughed, and abscess had formed in the lesser sac. He said in spite of the Mayos' result it was worth trying, and he did not think it a laborious process.

Mr. Stoney said that the general opinion of Cammidge's reaction was that it was practically useless, and only in a very small proportion of cases did it give any definite information. As regards treatment, it was quite evident that the patient was suffering from acute pancreatitis, but not of too severe a type, so the reason for opening the gall-bladder was that by doing so the inflammation might subside, and the gland return to normal. There were stones which were overlooked owing to their small size. As regards the question of immediate operation, the patient was admitted in the middle of the night. As the temperature was only slightly raised, it was not thought there was any urgent necessity for any operation. When seen in the morning there was marked jaundice with pain, which made him conclude it was a case of biliary colic. The patient did not look as if she was suffering from anything like perforation. The possibility of the tumour being a subphrenic abscess never occurred to him, because the large size of the tumour, the fact that the temperature was normal, and, further, the fact that at no time were there septic symptoms made him inclined to think that it was either a true cyst or a pseudo-cyst in the lesser sac of the peritoneum.

Notes on a Case of Early Operation in Sacro-Iliac Disease (with Lantern Slides).

Mr. W. I. de C. Wheeler read a paper on sacro-iliac disease, and illustrated his remarks with an account of two recent cases. He emphasised the fact that the text-book signs and symptoms do not exist in the disease until there is advanced destruction of the joint. At this time surgery could not be expected to accomplish much. Early diagnosis could be made if sacro-iliac disease was more often looked for in patients suffering from vague pains in the sacro-gluteal region, especially when the pain was transmitted down the sciatic nerve as far as the knee. There was always discomfort about the joint in early disease which

manifested itself, *inter alia*, by the unwillingness of the patient to change his position when lying in bed. An X-ray photograph gave most valuable information, and showed a focus in the sacrum or ilium at a very early stage. Occasionally the symptoms of sciatica and lumbago come on very acutely with a sharp rise of temperature in commencing disease of the joint. Mr. Wheeler referred at length to the great paucity of literature on the subject especially in connection with the operative surgery and applied anatomy of the joint. He recommended an incision carried below the crest of the ilium, the centre of which should correspond to the junction of the posterior third with the anterior two-thirds of the crest. The incision is an admirable one, lying between two blood supplies. The bone is exposed midway between the sciatic notch and the crest of the ilium, and is here drilled or trephined to reach a focus in the upper and anterior portion of the joint. An extension of the bone opening in a downward and slightly forward direction exposed the anterior part of the joint in its entire extent, and if the bone was gouged away towards the posterior spine the back of the joint is quite accessible. Mr. Wheeler deprecated late operations after abscess and sinus formation, and in any event the posterior route for reaching the joint was surgically and anatomically unsound. In one case, in which Mr. Wheeler's operation was performed, a focus was discovered in the joint early by an X-ray photograph. Portion of the iliac bone was removed in the manner stated, and half a drachm of pus was evacuated. Six months afterwards the man had gained in weight, was apparently quite well, and was suffering from no pain or discomfort.

Mr. Gunn said that the method of getting at the diseased area seems to be an excellent one. He has operated on cases with sinus. The difficulty is that the disease is not confined to one spot, as there is often spinal and hip joint disease as well.

Mr. Blayney said as regards diagnosis by X-rays, it would be very difficult where the disease was confined to the synovial membrane, or where there was only a very small focus of disease present. He knew many cases of sacro-iliac disease where sciatica was not a marked symptom. It depends upon what part of the joint the disease starts. If it begins at the posterior aspect of the

joint the sciatic nerves will not be affected. The method of exposing the joint seems to be a very good one. It exposes the joint only at its anterior part, but you are probably able to follow the disease if it is more extensive. He would like to know the cause of the elevation of temperature, because tubercular processes do not cause any such elevation unless there is a secondary infection.

Mr. Pearson said that Mr. Wheeler's method of exposure is not to be recommended in primary synovial forms of the disease. Unfortunately, these are the forms which cannot be diagnosticated by X-rays. Instead of making a transverse curved incision, an oblique incision downwards and forwards, parallel to the upper border of the gluteus maximus, just the same as Kocher's incision for excision of the hip, but placed at a higher level, might do less anatomical damage, and one could split the fibres of the gluteus medius through this incision. If the focus appears at a lower level one should place the drill somewhat lower, as it seems to be quite easy to get into the joint at a lower level, and by that oblique incision one could get higher or lower as one wishes.

Mr. Wheeler said the synovial membrane in this joint is a very primitive structure, and there is only a very small synovial cavity, so in a large percentage of cases the disease will be found in the bone. But if the disease is confined to the synovial cavity there will be very few symptoms till the bone is attacked. He said that although sciatica is common it is not present in every case. As regards the temperature, in tuberculous lesions you do not get any elevation of temperature. He had not got a bacteriological examination of the pus. The possibility of the infection being pneumococcal had occurred to him.

Acute Unilateral Pyelo-Nephritis, with Report of two Cases.

Mr. Seton Pringle dealt at some length with the ætiology of this condition, and expressed the belief that the infection reached the kidney sometimes by the blood stream and sometimes up along the ureter. He illustrated his remarks by the notes on two cases, in one of which the infection was hæmatogenous and in the other urogenous. Both the cases recovered. Mr. Pringle laid stress on the similarity of the

symptoms in this condition with those seen in acute intra-abdominal disease.

Mr. Gunn said that *B. coli* infection occurred more commonly in children than was generally supposed. Another point of some importance, that while in the majority of cases we get pus in the urine, yet in quite extensive *B. coli* infection a clear urine was common. So it is necessary to make a microscopic examination of such cases. He was called the other day to a lady who was four months pregnant, and who had acute pain on the right side of the abdomen, vomiting, and temperature 103°, fast pulse and distended abdomen. The physician in charge thought she had some form of acute obstruction, the surgeon thought it was one of appendix trouble, and as *B. coli* was found in the urine, he (the speaker) thought there was a *B. coli* infection of the right kidney. On opening the abdomen he found a twisted ovary.

Mr. Stokes raised the question as to whether *B. coli* might not be present in urine without any inflammation of the kidneys or bladder being present. About four years ago he was requested by the pathologist to examine ten cases of urine from typhoid patients, and *B. coli* was found in them all.

Mr. Pringle said he had not met with cases in children. With regard to the case mentioned by Mr. Gunn he wanted to know was there any tenderness in the costo-vertebral angle behind, as great stress is laid upon it. As regards *B. coli* being found in typhoid cases, they are commonly found in urine without there being any symptoms of inflammation. If the kidney has a lowered resistance then an acute infection sets in.

Friday, May 26, 1911.

The President in the Chair.

Carcinoma of the Larynx.

The President (Mr. R. H. Woods) read a paper on a case in which he extirpated the primary growth and subsequently the infected lymphatic glands. Before the first operation a swab was taken from the growth. On cultivation many bacteria were

found to be present—*Staphylococcus albus* being the principal one. A vaccine was prepared, and the patient received an injection the day before operation. The wound was very slow in healing afterwards. Some months later the growth returned in the glands of the neck. It was found, on attempting to remove these, that they were adherent to the great vessels and to the vertebræ. It was thought inadvisable to proceed with their removal. The patient was placed on thyroid extract, three grains thrice daily, afterwards increased to ten grains. For about three months no appreciable improvement took place. The skin over the swelling became reddened, and an incision gave exit to a quantity of puriform material. At the end of three months the patient's general condition began to improve, and the tumour got smaller. It has now completely disappeared, and the patient feels quite well.

Mr. P. J. Dempsey expressed the gratification of the Section for the presentation of such an extraordinary case. The method described of removing the larynx appeared to him to be very much more favourable than the old-fashioned method, and he did not think that under similar conditions of sepsis in the olden times the patient could have survived. The feeding tube appeared to have been a great difficulty. Nature, fortunately or unfortunately, had made a fistula, and it was questionable if it would not be an advantage to have had it done at first. He had read of successes by thyroid treatment, and he had read of failures, and the long period mentioned by Mr. Woods before any change was noticed—practically three months—suggested that the failures might have been due to the treatment not being continued long enough. The removal of the thyroid gland for the cure of cancer had been reported, with some cures, but they were cases of primary growths, not of secondary glandular affections.

Dr. Pearson said he had been present at all the operations, and his own impression at the last was that the patient had not very long to live. He was surprised to see the patient later in a theatre, looking in good health, and showing very little sign of swelling about his neck. He would like to know what symptoms of intolerance the patient displayed when put on the 12 grains of thyroid extract every day.

Dr. H. Stokes asked whether the curious form of ulceration could have been due to some organism other than that got in after the operation. Recently he saw a bladder case in which the bacillus was isolated, and after inoculation with it everything cleared up. He understood that in giving Coley's fluid for sarcoma, much benefit was not got until the growth began to break down; it was probable that the thyroid extract had the same effect as Coley's fluid.

The President, in reply, said that the thyroid extract affected the patient by causing nausea. A culture was made from the pus of the suppurating wound, and was found to be one of pure *Staphylococcus albus*. With regard to the influence of the injection beforehand, he thought it was open to suspicion that that might have been the cause of the suppuration. He did not think they knew where they were in vaccine therapy, and in future he would use it much more sparingly than in the past.

Some Experiences with Arseno-benzol ("606") *in the Treatment of Syphilis.*

Mr. Blayney read a paper written by Mr. P. J. Dempsey and himself. The paper began with a brief account of the steps which led to the employment of salvarsan in syphilis. Then followed a description of the intravenous method of giving the drug, which method was recommended as the best. The history of ten cases in which it had been administered, with very good results in all but one, was given. The exceptional case was one of tertiary infiltration of the larynx, and in this no improvement followed the injection. A second injection after an interval of five or six days was recommended in all cases.

Colonel Birt said he had listened to the paper with great pleasure because the experiences corresponded with the observations that he and others had made in the army. He had had the opportunity of watching the effects of "606" in about one hundred cases, and in some cases they had simply been marvellous. The common syphilis might heal without any drug, or with small doses of mercury, but these cases were those which had resisted the ordinary treatment. They had been through a prolonged course without effect. When treated with "606" they had, with two or three exceptions, recovered. The only case in which absolute failure

had been observed was one of hereditary syphilis with interstitial keratitis. Two or three cases had undergone relapses several weeks after injection, but a second injection gave good results.

Captain Frost said the first case he treated was a man who had practically no palate. In the course of six months no treatment of mercury or iodides had any effect. He was very debilitated. He gave him about .2 gram of "606," and his temperature went to 104°. Ten days later he gave another .2 gram. Between the two there was a tremendous improvement. After the second dose he discharged him from hospital. In six weeks he came back with ulceration of the palate. He gave him .4 gram, and he bled profusely. After the injection the whole thing cleared up. Most of the cases of relapse cleared up absolutely in five or six days after a second dose, except one or two with skin eruptions. It was hard to tell when the secondary symptoms had healed. The cases had had about 15 to 20 grains of mercury by the intramuscular method. In one particular case there were about six weeks between the first and second injections. The patient was collapsed, and had weak pulse for about six hours. He was the only case he had seen that had been weak after injections. He was convinced that two injections were necessary, and that the second should be larger.

Dr. Henry Moore said he thought the question of the repeating of the dosage could only be arrived at by testing the Wassermann reaction. He had had a patient who got a chancre on his lip. He got scarlet fever, and during that time he showed no symptoms of syphilis, although he should have had the secondary eruption at the time. About a month after he had been cured of the fever the chancre on his lip became larger, and he had a secondary eruption. He gave him "606," and the chancre healed in eight or nine days. His eruption and glands commenced to subside, and he gave a modified plus and minus reaction. Six weeks later he still gave a modified reaction, and he gave him another injection of .5 gram. A week afterwards he gave a negative reaction, and he did not see him for some time. Later he came to him again. His eruption had not completely disappeared, and he gave a modified reaction. Should he again give him "606," or treat with mercury by

intramuscular injections before giving "606" again? Continental observers stated that the action of "606" was intensified by mercury, and cases had done best with him with a course of intramuscular injection of mercury before the "606."

Dr. Pugin Meldon said he had tried subcutaneous injection with very disappointing results. He injected about .45 gram in a neutral solution. The next day the rash came out, and a fresh crop of syphilis appeared, and he put the patient on mercury again. Since then he had injected intravenously. He had repeated in about three cases, making the second dose smaller in the case of a man. In a case of primary syphilis, if there was much induration one would expect that the place where the spirochætes would not have a chance of coming in contact with the blood would be in the sore, and he thought it was wise to excise the sore. In women with fat arms it was very troublesome to get into the vein. It was often necessary to expose the vein, and then put a needle into it.

Mr. W. I. de C. Wheeler said the difficulty of the intramuscular method was very much less than that of the intravenous method. In his experience, if a perfectly sterile injection was put into the muscles of the back, and the place was massaged, there would not be the slightest trace of hardness or pain after the injection. He had had a case where the needle was in the vein, and nothing would persuade the solution to go in by gravitation. It might be that the needle was transfixed in the lateral wall of the vein. In another case a good deal of the solution got into the tissues of the arm, though massage brought it down. These were difficulties of the intravenous method, and should be pointed out. If the intramuscular method was efficacious without difficulties, then it was the right method, though the weight of evidence was in favour of the intravenous method.

Dr. Pearson asked if Mr. Blayney considered it wise to give an intravenous injection to an out-patient, or whether he considered the patient should be confined to bed for at least twenty-four hours. One case which was given a mercury injection prejudiced him against the intramuscular method. The patient developed a very hard swelling, and though it subsided they decided at the Adelaide Hospital to

abandon the intramuscular method. As regards the after-treatment, the "606" had not yet stood the test of time, and he would recommend mercury subsequently by the mouth.

Dr. O'Farrell said he found the amount of alkali recommended was not enough to dissolve the solution, and he had found it necessary to add more. He had no difficulty with the inflow of the solution. Perhaps the needle in Mr. Wheeler's case was blocked with rust after boiling.

Dr. Charles said a patient injected with "606" in August and September, nine months later showed well-marked syphilitic lesions in the mouth and head. He was now under treatment with mercury. He found that after "606" patients did well with the combination of mercury. He was in favour of the intramuscular method, it was so much easier.

The President said he had used "606" in about twenty cases, chiefly in hospital. The method he employed was practically the same as Mr. Blayney's, with the difference that he used a small glass filter in the middle of the tube between the reservoir and the needle, which stopped anything gross or mechanical from getting into the vein. He had had a difficulty in striking the vein in some of his earlier cases, especially in well-nourished women. It occurred to him to have the arm steeped in hot water to dilate the vein, and this had made a great difference. In addition, he tied a strip of bandage above the elbow to congest the forearm. He had had a special case of a boy, now about twenty, who was brought to him as a child suffering from congenital syphilis. His infection must have been virulent. Although a very decent boy himself, he was brought up in bad surroundings, and had been badly nourished. He had gummata in various parts of his body, one of which nearly choked him. He lost practically every bone in his nose. He had no septum, and the base of his skull and pharynx were obvious. He treated him by every possible method, but on each occasion when they got him well he relapsed. He determined that if he could get hold of a dose of "606" he would give it to the boy. He gave him the first dose that came into the country by subcutaneous injection, and he was now in perfect condition. The lupoid cases were the most resistant to the influence. He

had had only one case of recurrence, in a lactating woman. In three weeks time she was as bad as ever, but he gave a second intravenous injection combined with mercury, and since then she was perfectly well. He noticed an extraordinary improvement in the health of the child. The most terrible of all cases of syphilis were those where it attacked the organs of a special sense. In one or two cases he had the satisfaction of finding the hearing in labyrinthine disease improve to a considerable degree. It was, of course, much better to get the patient into hospital if it could be managed; but it was better to give the injection and let the patient go, with proper instructions, than not to give it at all.

The Secretary, in reply, said an improvement in the general condition of the patient had been noticed apart altogether from the improvement in the local lesions. Interstitial keratitis seemed to be the syphilitic lesion most difficult to treat. In advanced phthisis bleeding took place after injections, and early lung trouble required their cautious administration. In a certain number of cases after injection there had been a lesion of the auditory nerve. Further experience showed that this was not the result of arsenical poisoning. Such a lesion was amenable to further syphilitic treatment, and was really a recurrence of the syphilis. The recommendation apparently now was that the second injection should be given five or six days after the first. The real question between the two methods was which was the better. It was not a question of difficulty, but of results. The amount of alkali required seemed to vary; apparently there was not an absolutely fixed amount, and the directions given were evidently only approximate.

SECTION OF ANATOMY AND PHYSIOLOGY.

President—Professor E. P. McLoughlin, M.D.
Sectional Secretary—Adams A. McConnell, M.B.

Friday, April 28, 1911.

The President in the Chair.

Intraocular Pressure.

Mr. Story read a paper on "Intraocular Pressure," in which he called attention to the views of Thompson Henderson

on the anatomy of the cribriform ligament, and the ocular blood supply—views which are at variance with those accepted generally by the ophthalmological world. Henderson asserts that the ligament is not formed by Descemet's membrane, but by the corneal fibres themselves, and he also asserts that the anterior ciliary arteries universally accepted, have no existence, and that the circulus iridis major is a purely venous system. All these points are established by means of serial section. Mr. Story exhibited Henderson's glaucoma flask, and also one of the experiments of Birnbacher and Czermak upon the filtration of fluids in tubes, with movable and permeable walls. Attention was directed to several points in which the author considered that difficulties and inconsistencies were present in the views of Henderson, as published lately in his book on glaucoma.

Professor Thompson dealt with the relationship between the intra-cranial and intra-ocular pressures, and with the secretion of the aqueous humour.

Mr. Crawley pointed out some difficulties in reconciling Henderson's views with the ocular conditions present in association with intra-cranial tumours and irido-cyclitis.

Professor Dixon mentioned the different results obtained in the study of the vessels of the eye by serial sections and by injections.

(*a*) *Ossa Suprasternalia*; (*b*) *The Paroccipital Process at Birth.*

Professor A. F. Dixon exhibited a specimen in which well-marked suprasternal bones were present. An X-ray photograph, prepared by Dr. W. G. Harvey, clearly indicated the structure of these bones and also the existence of clearly-defined joint cavities separating each from the upper border of the manubrium sterni

Professor Dixon also showed an example of a well-developed paroccipital process in the skull of a child at birth. The specimen proved the congenital nature of the condition and indicated its atavistic significance. The idea that the process is developed during life as a result of certain forms of occupation receives no support, but is rather disproved by the occurrence of specimens like that exhibited.

The President and Professor Geddes spoke, and Professor Dixon replied.

SECTION OF OBSTETRICS.

President—H. Jellett, M.D., F.R.C.P.I.
Sectional Secretary—Gibbon FitzGibbon, M.D., F.R.C.P.I.

Friday, May 12, 1911.

The President in the Chair.

(*a*) *Recent Specimen showing Ureter Implanted in Bladder;* (*b*) *Tubercular Uterus.*

The President exhibited specimens of the above. The first was from a case in which he operated by Wertheim's method for malignant disease of the cervix. In the course of the operation, in cutting through a piece of cancer that lay close to the bladder, he found he had cut through the ureter. On examining it he found the ureter apparently impervious, and entirely occupied by cancerous tissue. Later in the operation he cut off the lower end of the ureter where it was still blocked, until he got to a piece of healthy ureter. He then adopted an expedient mentioned by Professor Alfred Smith at a meeting of the Academy, of drawing the bladder up to the ovarian pelvic ligament and cutting a small hole in the fundus of the bladder; and carrying the ureter into the bladder. The cancer was extremely extensive, and in separating the bladder wall from the anterior wall of the cervix, it was found that the bladder was involved. He sutured it up, and closed it completely, and it remained closed for nearly a fortnight. Then it broke down owing to the extension of cancer. The method of suturing was one which was available in cases in which the ureter was left somewhat short. The second specimen was one of very considerable rarity. It was only after it had been cut in several places by Dr. Rowlette that he was able to determine it to be tuberculosis of the uterus. The large lump in the specimen, at the time of the operation, exactly resembled a suppurating myoma. It was a mass of tiny cysts containing pus. Both tubes were occluded, and contained a small amount of fluid. On examination of the tubes the tubercular nature was easily determined. The last case which he saw was in the

Rotunda during the Mastership of Sir William Smyly, when he cut sections of scrapings, and found large cells. In the present case the endometrium was apparently healthy. The symptoms of the patient were extremely marked. She was thin. She had repeated hæmorrhages and violent pain. When he examined her he could not make a diagnosis. The uterus appeared to be enlarged at the fundus, but did not give the feeling that would lead them to expect the condition that they found. At the time the tubes were removed they were of the same consistency as intestines. He did an exploratory laparotomy. They thought it was a sub-serous myoma that could be shelled out, but on discovering the condition they decided it was hopeless to leave the uterus in the state in which they found it. The patient made a very good recovery.

Dr. Rowlette said the specimen as it then appeared was not quite as like a myoma as it was at first when he cut into it. The patches which now looked very caseous were fluid, so that it did not suggest a tubercular condition, and he took it to be a myoma. The entire uterus, with the exception of that one portion, appeared to be quite healthy. It was only on cutting the sections of the tubes that any suspicion of tubercle arose; he found tubercles in the walls of the tubes. He made further examination of the tumour, and it required a great many sections before he got one that was definitely tubercular. A section under the microscope showed giant cells. There was very little muscle tissue present through the mass. What was present was exactly like the normal uterine tissue, so that one was led to the conclusion that it was a tuberculous granuloma, and that no myoma was present in the uterus.

Professor Alfred Smith said the demonstration of the success of the implantation of the ureter was to him very gratifying. He noticed that when implanting the ureter into the bladder sutures were used. His idea was that when the bladder was anchored so that it could not retract, if they made an opening sufficient to allow the ureter to drop into the cavity of the bladder, all that was necessary was merely to close on each side the angles of the bladder wall. The rapidity with which the operation could be performed was noticeable. It was interesting to him that there was no evidence of hydronephrosis. Where they had a leakage

through a ureter, they would have the kidney secreting, and hydronephrosis coming on. If they cut the ureter and ligatured at once, the tension in the kidney reached a certain standard and the kidney ceased to functionate.

Dr. E. Hastings Tweedy said the tubercular specimen was very interesting. Tubercular tubes were common. In unmarried women who got pus tubes, it was more likely that they would be tubercular than any other form of infection. It was difficult to understand how it arose. It did not seem to have got up through the cervix, and the tubes seemed to be tolerably healthy. He supposed they must assume that the tubercle came as an infection from the blood, but one would think the tubes or the internal os would be the place to be primarily infected. With regard to the patency of the ureter, experiments on rabbits did not bear out the view formerly held and expressed by Professor Smith. In rabbits whose ureters were absolutely tied, hydronephrosis arose, but when the least leak was allowed hydronephrosis did not arise.

Dr. Ashe asked if the subject of the second case was a married woman, and how old. He knew a case in which a husband had had a testicle removed for tuberculosis. The wife had her tubes and uterus removed for tubercular disease.

The President, in reply, said he was certain that he used a fixation suture in the case of implantation. His method was to pass the suture through the bladder wall, and pull the ureter down through the opening. He was afraid no one could express any opinion about the condition of the lower part of the ureter that remained. There were three parts to the ureter: the first from the kidney to the malignant disease, the second where it passed through the disease, the third where it was in the bladder wall. The first part was left, with the exception of the lower portion. Then as much as possible of the portion that traversed the disease was taken away. The patient had been married over nine years, but had never been pregnant. She was thirty-one, and looked about twenty.

Rotunda Reports, 1909-10.

Dr. E. Hastings Tweedy read the Rotunda Hospital Reports for 1909-10.

Dr. Gibbon FitzGibbon congratulated Dr. Tweedy and the

Hospital on the Reports which he had read. When Dr. Tweedy took up the Mastership at the Rotunda he started a non-operative treatment of eclampsia, and had maintained it since. The general tendency in the literature now, especially in America, was to revert from the operative treatment, though it was largely lauded at the time when Dr. Tweedy instituted his non-operative treatment. Dr. Tweedy had said that only contracted pelves under $3\frac{3}{4}$ inches were recorded. There were a certain number of cases above that which were still contracted pelves. These used to be treated by induction of labour. Some of them must be looked upon as contracted, and the patients require some other treatment than being left to deliver themselves. If they required operative treatment, why should they not be included in the list of contracted pelvis? In the Gynæcological Report the case of tetanus was put down to the catgut. It would be interesting to know how it was prepared. He had come across a case in which he had no doubt it developed as a result of the catgut, which was prepared by alcoholic sterilisation. He would like to know if Van Horn's catgut stood the test, as it was largely used at present.

Professor Alfred Smith said it was difficult to discuss the Report without having first read it through. He was struck with the number of patients who now went with perfect safety to the Rotunda for delivery. When he was Assistant Master the number was nothing like it. The management was to be congratulated on maintaining the high standard which had always characterised the Dublin school. Any one who had known the previous results in the treatment of eclampsia, could not but pause and consider if the lavage treatment was not the best. He had criticised the treatment in its earlier stages; he had thought Dr. Tweedy was claiming too much; but he seemed to have gone on in his series of cases, and his results were highly creditable. With regard to pubiotomy, Dr. Tweedy had at one time spoken strongly in favour of a particular route and a particular needle, and now he spoke just as strongly in favour of another route and another needle. He (Professor Smith) doubted if they had reached finality in the operation. He did not use catgut unless prepared by his own staff. It was iodised catgut he used, and he considered this method of preparation absolutely efficient.

The President took the opportunity to congratulate Dr. Tweedy on his Report, and to thank him for the efficient and admirable condition in which he found the Hospital when he took it over from him. There was no human being who followed a human being who did not desire some variations, but he did not think any one could say anything other than that the Hospital was in a wholly admirable condition in every department. In his opening paragraph Dr. Tweedy had referred to the possibility of improvement in the results as an outcome of the opening of the new labour wards. The results up to the present were as good as they could be, but he confessed that it was an astonishment to him how they were so. They were passing through the wards one thousand per year more patients than when they were built. He differed from Dr. Tweedy in that he did not think they should endeavour to conduct the maternity wards of a large hospital on the same lines as one conducted private maternity practice. The conditions were different in every respect. The number of patients was different. The number of examinations made was different. The tendency of infection, once brought into and established in a ward, to perpetuate itself, was entirely different. The conditions of hospital practice limited them in the use of the teaching capacity of the hospital. The number of vaginal examinations had to be limited considerably in order to keep morbidity to the lowest bounds. It was a question if they were entitled to try to bring down the morbidity in the hospital, if the result was to raise the mortality outside. If students were cramped in the number of examinations, that might be an excellent thing for the morbidity of the hospital, but it would certainly move in the direction of increasing the mortality of students' practice when they became qualified practitioners. No one could express any opinion as to the treatment of eclampsia other than that Dr. Tweedy's results were as perfect as they could be. He had not yet seen his way actually to follow Dr. Tweedy with regard to chloroform. He thought it was beneficial in preventing the effects of violent stimulation of the patient during certain procedures which might have serious consequences. Washing out the stomach when the patient was on the verge of eclamptic seizure was not altogether devoid of risk, and in regard to the matter of chloroform being a toxic agent, one had got to look at other

results, and he understood that the person whose results ran Dr. Tweedy the closest was Dr. Stroganoff, who did not allow even a catheter to be passed without giving chloroform. That did not prove that chloroform had not its disadvantages, but it did prove that it was not a toxic agent. Dr. Tweedy said he had definitely proved that food may be the causal agent of eclampsia. If every disease in which patients were killed by food could be attributed to food, they would get the ætiology straight off of a great number of cases. He had demonstrated that food was prejudicial, but that was different from establishing it as the causal agent. He did not follow him when he said that all hæmorrhages in the operation of pubiotomy were caused by a blunt needle. The separation of the bone was capable of causing some of them. The Report could hardly be surpassed, both as a record of work done and as a description of the manner in which it had been done.

Dr. Tweedy, in reply, expressed his indebtedness for the manner in which the President had spoken. He had no doubt that the Report would be surpassed when the President came to make his report seven years hence. He had not the least doubt that the new labour wards would be one of the methods by which the new Master would lower the morbidity of the Hospital. Although the Rotunda Hospital was the safest place in the world for delivery, they had not yet reached bed-rock as regards morbidity. When he took up his duty as Master, he felt he inherited a very old institution, and he said to himself the Rotunda Hospital was doomed the day that architectural perfection became the all-important item in maternity practice. They could not compete in money or structure with some of the great places that were supported by Government. Men were taught in the Rotunda to go into general practice. Surely the worst way to teach them was to impress them with the importance of brick and mortar. Their nurses had too short a training for private practice. They left the Rotunda at six months, and were fairly good, but at the end of six years a great number of them were hopeless. The argument of the Master that he did not think they were entitled to lower the morbidity of the patients at the expense of the students was one that could be used against all humanitarians. With regard to vaginal examination, these were not discouraged

at all. He thought the examinations were made with the utmost safety if they used sterilised finger stalls. It had been his observation that chloroform had a profound influence on the liver, and there was an enormous amount of evidence in support of it. Stroganoff, of St. Petersburg, who had had results almost identical with his own, did not use chloroform in the way that they understood it. He gave a whiff of chloroform before a catheter was passed or a tube passed. Personally he did not see the least objection, though he did not think it necessary, and now, if he was treating eclampsia, he would prefer to give ether in small quantities just before passing the tube. Their patients were saturated with morphia, and that would take to some extent the place of chloroform. He thought a normal child would always pass naturally with a pelvis over $3\frac{3}{4}$ inches, but great complications occurred in those cases. It was a serious thing to measure a woman. He would not measure one who delivered herself naturally. In the Rotunda they sterilised in Jellett's box and soaked in iodine. He resorted to the Jellett's box until he got tetanus. Then he added Professor Smith's method, and he need hardly say, iodine would not kill a tetanus bacillus. In Steevens' Hospital they used formalin catgut and had not any trouble. The paraffin method was complicated, but gave splendid results. As to his alleged change of front with regard to pubiotomy, the greatest fallacies were the supposed truths recorded from memory. All he said was, that as compared with any other operation, pubiotomy done in any way was to be preferred. With the sharp needle it was easier, with care, to avoid hæmorrhage and subsequent tearing than with a blunt needle.

SECTION OF PATHOLOGY.

President—A. H. Benson, M.B., F.R.C.S.I.

Sectional Secretary—W. Boxwell, M.B., F.R.C.P.I.

Friday, May 19, 1911.

The President in the Chair.

Renal Tumour.

Mr. L. G. Gunn exhibited a specimen of renal tumour, as an example of the commonest form of malignant disease

affecting the kidney—hypernephroma. It was a typical example, and showed the yellow masses with hæmorrhages in some of them. Such tumours were about 50 per cent. of all the renal malignant tumours. The structure very closely followed the structure of the supra-renal capsule, and in parts it looked almost sarcomatous. They all followed a very constant type, and varied practically only in size. They might exist for years without causing symptoms. The earliest symptoms were bleeding and possibly local pain. The prognosis as regards removal was not very good, as secondary deposits were apt to occur, commonly in the lungs. This patient was alive and well.

Dr. O'Farrell asked what was the microscopic appearance of the urine, and if there was any secondary deposit in bone.

Professor M'Weeney said that, looking at the specimen, without having heard Mr. Gunn's remarks, he would have no hesitation in diagnosticating hypernephroma on account of three features which he had always observed in the cases he had seen: (1) The nodular nature of the growth; (2) its position in the hilum of the kidney, pushing the kidney substance to one side, so that the poles of the kidney were fairly well preserved, while the middle portion was thinned out; (3) the tendency to hæmorrhage. He might add a fourth feature of somewhat more doubtful character: it was the yellow colour of some of the nodules.

Mr. Gunn, in reply, said the patient had several attacks of hæmorrhage within the past two years. She came under his care shortly after one of these attacks. He cystoscoped her, and saw the bleeding was from the right kidney; and the next day he catheterised both ureters, and examined the character of the urine from each. It was practically normal on both sides. There were one or two red corpuscles from the side from which the kidney was afterwards removed, and the amount of urine passed was somewhat small. One could feel a quite definite tumour. They looked as carefully as possible for any signs of bone deposits, but he could not find any evidence of such.

Vaccines and Pus.

Professor White read a paper, and exhibited some smears of pus, illustrative of a new method of controlling the timing

and dosage of vaccines, with special application to post-operative suppuration. The principle of his method was, that by a study of the pus, both before and after inoculation, with a view to testing the phagocytic power of the cells, and the power of growth of the organisms, a sufficiently accurate indication could be obtained as to the correct size of the dose, and the time for its administration. He had observed that as the opsonic index rose, phagocytosis became more active, and the powers of growth of the organisms progressively less. On the second and third days after an appropriate dose, it would be found that phagocytosis was complete—all the organisms in a smear of pus would be seen engulfed within such pus cells as were still alive, and, furthermore, inoculation of an agar tube with some of the pus would give no growth in twenty-four hours. Within the next few days, extra-cellular organisms would again be found, and, *pari passu*, colonies would appear on the agar tube, while the index would be found on the down grade. These were the signals for a fresh inoculation. In the earlier cases he had made the three sets of observations concurrently. In the later cases he had given his inoculations guided by the pus alone, and the result was completely successful. The method would be found particularly useful in cases of mixed infections.

Professor Scott congratulated the Section on having heard a paper which he considered one of the most important advances in opsonic work. The older method was accurate, but tedious and expensive. Professor White's method could be carried out with a very much smaller amount of energy, and while it might not tell everything, it would tell all that was wanted to be known in about half the cases. He considered the paper of almost epoch-making importance.

Dr. Boxwell said he had seen one of the cases referred to by Professor White. For nearly a year after the operation, one for appendix abscess with peritonitis, the patient, a robust-looking young woman before her illness, continued to discharge pus from a sinus in her flank. She was by that time reduced to a skeleton, and apparently at death's door. From the first inoculation she began to improve, and she was now practically well. He had had the privilege of seeing the cultures from day to day, and it certainly was amazing how Professor White seemed to control the organisms, herd-

ing them at will within the pus cells, by his inoculations. His process of control, as far as he was aware, was quite new, and was a great advance on anything he had heard of in the practical application of vaccines.

Pathological Report of the Rotunda Hospital.

Dr. Rowlette read the Pathological Report of the Rotunda Hospital. [It was published at page 98 of the present volume.]

Dr. Kirkpatrick congratulated Dr. Rowlette on his report. The reports of the Rotunda Hospital had, he thought, done more for the reputation of the Dublin school than almost any other work. He thought it a pity that other hospitals besides the Rotunda and St. Vincent's Hospital did not follow the good example.

(*a*) *Aspergillar Mycosis, with Cultures;* (*b*) *Cultures of a Ringworm isolated from a Dog;* (*c*) *Osteo-Chondroma of the Vertebral Column, with Compression Myelitis;* (*d*) *Specimen of "Four Kidneys" from a Pig;* (*e*) *Cholesteatomata in the Lateral Ventricles;* (*f*) *Teratoma from Brain of a Horse.*

Professor A. E. Mettam read a paper on the above series of exhibits.

Professor E. J. M'Weeney, referring to a specimen of aspergillar mycosis of his which Professor Mettam had mentioned, in which aspergillar nodules had developed in a rabbit, said this occurred at the commencement of their knowledge of the immunisation of animals against the blood of other species. Instead of injecting, as they now did, either serum or the corpuscles separately, according to the particular kind of anti-serum they wished to obtain, he injected the defibrinated entire blood of the ox into the rabbit. It had been kept in the cold press in the refrigerator, and must have become infected; indeed, almost all his specimens of blood became infected with aspergillus after about a fortnight. One of the most remarkable histological features was the gigantic cells with which the films were surrounded. They were evidently foreign-body giant cells, and attained a very much larger size than tubercular cells. Had Professor Mettam grown the specimens from a pathogenic source from some infected animal? Had he tried the experiment of forcing

those fungi to produce their secondary sexual form of fructification? It would be interesting if Professor Mettam would initiate some experiments on the artificial culture of tumour cells. They had been cultivated in purity outside the human body in hanging drops. The human pathologist had difficulty in such experiments, as he could not get the material in perfect freshness, but Professor Mettam, with the power he had over his subjects, was in a favourable position for carrying out such work.

Dr. T. T. O'Farrell asked if the aspergillus in tuberculosis retarded or encouraged the tubercular process. He had a case which died, and he considered it died of the mould. He found that the moulds did not grow so well in the incubator as in the sun. As to the osteo-chondroma, he had found one *post-mortem* recently which was growing under the scapula, and he remarked that it grew both from the pleural surface and from the outside.

Professor Arthur White thought there were cases diagnosticated as tuberculosis which were really infections of the nature of aspergillus. He had known three such cases, in one of which the thing grew apparently from the lungs and appeared in the nostrils after death.

Professor Mettam, in reply, said he thought the aspergillus hastened the tubercular process. A section under the microscope showed the specimen practically swamped with the tuberculosis. It was doubtful, he thought, in most cases, whether aspergillus actually caused death, as there were cases on record in human medicine of patients who had suffered from the infection and recovered. The specimens were all grown in the incubator. They had been inoculated only about a week, and later would get quite mouse-coloured. When his time was a little more his own he might try the culture of tumours.

ANASARCA IN AN INFANT, NOT DUE TO RENAL DISEASE.

MM. Nobécourt and Paisseau (*La Quinzaine Thérapeutique*, July 10, 1911), report the case of a suckling two months' old, who suffered from slight digestive troubles and anasarca. There were no urinary troubles. The autopsy revealed healthy kidneys, but fatty infiltration of the liver.

THE NEW TREATMENT OF TUBERCULOSIS BY RADIO-ACTIVE IODINE-MENTHOL.[a] By DR. ROBINSON, Senior Physician of the British Hospital, Paris.

AT the last National Medical Congress of Hungary, Professor Szendeffy submitted to his colleagues the results obtained by him of two years experimentation with a new chemical compound of iodine and radium. He adduced a large number of facts showing that it was possible to arrest by means of this chemical product, *in vitro*, the development of the most virulent cultures of Koch's bacillus, and to stay the course of tuberculosis in animals experimentally tuberculised.

He and Dr. Kertez-Aba, Physician to the Austro-Hungarian Court, have alike reported a large number of clinical cases, which go to show, on the one hand, that the subcutaneous injection of radio-active iodine-menthol was very well borne by the patients, and that this chemical compound exercised a phagocytic action of the most powerful kind on tuberculous subjects, who improved and progressed towards recovery. Wishing to see his assertions controlled by a well-known specialist, he addressed himself to Dr. Samuel Bernheim, of Paris, President of "l'Œuvre de la Tuberculose Humaine," who possessed in his numerous dispensaries and sanatoriums a vast field of experience, in which there is never a want of subjects, and in which tuberculosis presents itself under all its forms. For well nigh a year Dr. Bernheim, with the co-operation of other physicians, Drs. Dieupart, Hervé, Diamantberger, Michalovici, Kaminsky, Baud, &c., have submitted a tolerably large number of patients to this treatment, and the clinical observations have been made the subject of a recent communication to the International Society of Tuberculosis, to the Clinical Society of France, and to other learned bodies.

Before recalling the conclusions based on seventy-five observations, having regard in particular to cases of pulmonary tuberculosis, I wish to report to the readers of the

[a] La Revue Internationale de la Tuberculose. Vol. XX. No. 3. Septembre, 1911.

Revue Internationale de la Tuberculose some details of the greatest importance. I have been placed in possession of them, indeed, by Dr. S. Bernheim himself, who has given me certain information about the new anti-tuberculous method—information the value of which our colleagues will appreciate. According to this able practitioner, the action of the chemical product invented by Szendeffy is due especially and almost exclusively to the volatility of radium, which is slowly eliminated, as is known, by way of the lungs. Here, then, there is a true elective action, a fixing of helium at the edge of the tubercles, and it is in no way surprising if the radio-activity neutralises the virulence of Koch's bacilli and their associates. According to Dr. Bernheim, this radio-activity acts equally in paralysing the harmful influence of the toxines which are found in animals injected with a chemical salt, particularly in the lobules of the liver, that great reservoir of microbic toxines. When we reflect how rapidly Koch's bacillus is destroyed by the sun's rays, when we remember with what ease the development of cultures of that bacillus is arrested when brought into contact with radium, we are justified in comparing these two physical phenomena.

Dr. Bernheim has communicated to me three recent clinical cases, which I proceed to record:—

Case I.—A society lady, aged twenty-four years, tubercular, daughter of tubercular parents, has had three miscarriages during the five years of her married life. Pregnant for the fourth time, and having reached the fifth month of her pregnancy, she was put under treatment by injections of radio-active iodine-menthol, and received two series of injections (80 in number). Thanks to these injections, the condition of this young woman has improved, and she has been enabled to bring to term a normal pregnancy and to produce a living child weighing above 3 kilogrammes.

Case II.—A similar case has been observed at the Anti-tuberculous Dispensary of Saint Denis, in a workwoman of forty-four years, tubercular, who had previously had seven premature confinements. She had been infected by her husband, who was also tubercular. She received injections of radio-active iodine-menthol from the third month, and

she, too, was enabled to bring a normal pregnancy to term and to produce a living child.

Case III.—Dr. Dieupart, on his part, has recently had under his care a patient sent to him from an anti-tuberculous dispensary, and attacked at the same time with pulmonary tuberculosis, with bacilli in the sputa, and with tuberculosis of the left wrist; for several months past the patient could no longer use this articulation. After twelve injections of radio-active iodine-menthol, the swelling of the radio-carpal articulation has completely disappeared, and the patient can now depend upon all the normal movements of his wrist.

Let us now recall the therapeutic conclusions deduced by the authors from their original work.

According to them, radio-active iodine-menthol destroys Koch's bacillus.

"1. In all the cases in which the search for the bacillus has been systematic before and after the injections, we find at once that the bacillus stains less well, that it is in a state of degeneration, that it rarefies, and ends by disappearing.

"2. Radio-active iodine-menthol acts powerfully on streptococci. We are aware that microbic affections are all the more severe where many associated forms are present. In diphtheria, for instance, Löffler's bacillus, combined with the streptococcus—if, according to Variot, it causes sore throats not more severe in the great majority of cases than those due to a pure Löffler infection—may sometimes become virulent and cause a diphtheria resistant to Behring's serum, to Marmorek's anti-streptococcus serum. In tuberculosis, the association of Koch's bacillus with other microbes is generally of unfavourable prognosis. Streptococci and staphylococci seem to increase the toxic secretion of the bacillus. Radio-active iodine-menthol very quickly destroys the streptococcus. In his observations, Dr. Kaminsky describes two severe attacks of sore throats due to streptococci; on the third day, there was no longer either sore throat or streptococcus—a sterilising action which appears truly of a prodigious activity. Dr. S. Bernheim notes in the sputa of certain patients the presence of numerous streptococci, which, after the injections, lessen in number, and finally disappear.

"3. Radio-active iodine-menthol improves the general

well-being. In these conditions, the destruction or the attenuation of the bacilli *ipso facto* involves the disappearance from the organism of the toxines secreted by them. All the patients, even those whose state was hopeless, showed a great improvement in their general condition. Individuals who were exhausted, and could not even walk, move about without fatigue; patients in a dying state, on whose cure it would be rash to reckon, can take walks; the unfortunates who suffer from intense dyspnœa breathe normally. They take to work again eagerly, feel stronger and more cheerful.

"4. Radio-active iodine-menthol seems to have a dynamogenetic action. The authors have sufficiently explained themselves as to the continuous radio-active emanation in this product. It would, indeed, seem that this emanation shows itself in patients by facts which are, so to speak, mathematically demonstrable. A feeling of strength and of coming to life again pervades them. This radio-activity given to the sick is evident. One observes more strength in almost all cases. Neither the iodine nor the menthol is the agent responsible for this improvement. Nothing can explain this recovery of strength unless it is the emanation of the radio-active barium chloride. This dynamogenetic power confirms, then, the views of Szendeffy, of Wickham, and of Degrais.

"5. Radio-active iodine-menthol increases weight. On this point we should not quote any instance, for it would be necessary to quote all. Increase of weight, for the physician a guide as to the efficacy of his treatment, is for the patients a precious relief. We accustom them in the dispensaries to weigh themselves regularly, and they are delighted when they verify a gain of some centigrammes. It is because all—as the earliest symptom of their condition—have wasted that this emaciation frightens them, and compels them to consult the physician. When they gain weight, they believe themselves cured, and this tells much in the direction of the real cure.

"The gain in weight is rapid enough. Some patients have gained a pound a week: many increase in weight in similar proportions. Others, who have been reduced to a very poor general state, with sputa crammed with bacilli, have fattened in large proportion. A sufficiently striking fact is this—

tubercular patients of the cavity type, in whom the prognosis is fatal, have also put up weight.

"6. The beneficial effect of the treatment persists despite intercurrent affections. Some of the patients have had influenza; local attacks of pleurisy have obliged them to keep to bed for several days, to stop the injections. The attacks have not lasted long, and have been mild. There has been simply an interruption of all the radio-active treatment, no aggravation of the general or local symptoms.

"7. Radio-active iodine-menthol treatment cures tuberculous adenitis. The authors cite several cases in support of their statements.

"8. Radio-active iodine-menthol acts on tuberculous laryngitis. When tuberculosis attacks the larynx, we may nearly always say that the subject is lost. It is a grave form of the disease, which progresses and never stands still. The authors quote two cases in which improvement showed itself: at the beginning the voice was hoarse, cracked, not clear. Little by little, after the injections, the normal tone of the voice returned.

"9. Radio-active iodine-menthol acts locally on the tuberculous lesions, causes the expectoration to lessen, suppresses cough, makes fever and night sweats disappear.

"10. Radio-active iodine-menthol regulates the gastric functions. The frequency of digestive troubles is enormous in tuberculosis—even pretuberculosis cases of a dyspeptic type have been described. Phthisis, moreover, often begins after this fashion: the appetite is capricious, tastes are depraved. In many instances, loss of appetite for a long time is the rule; attacks of vomiting often occur, there is an absolute intolerance on the part of the stomach. To overfeed such patients by *gavage*, or forced feeding, would be impossible. In all cases appetite returned after radio-active iodine-menthol."

What need be added to these conclusions of the authors?

Researches undertaken with radio-active iodine-menthol are not of recent date, as certain members of the profession have made out. They already date back more than three years. On the other hand, this remedy, after having been the object of laboratory research, has been applied, watched, and controlled by a very large number of physicians, in the open and public practice of sanatoriums, dispensaries, and

hospitals. Its action, observed by numerous physicians unknown to each other, has been tested, and it is absolutely impossible to doubt the efficacy of this chemical agent. At the present time also numerous hospitals in Paris and abroad are submitting tubercular patients to this new treatment. Without doubt this is only the beginning of radio-active researches, which, however, have been already undertaken, in connection with another train of ideas, but to combat the same bacillus, by Dr. Danlos, physician to the hospitals of Paris, Professor Degrais, and Dr. Wickham. It is almost certain that this method will be brought to perfection by gradually and cautiously increasing the dose of radium suitable for injection; but, in any case, it seems to me interesting to bring to light without delay these scientific investigations of the highest importance.

[The composition of the anti-bacillary product is stated to be the following:—

Peptonised (?) Iodine	-	0.75 centigramme.
Menthol - -	-	0.06 ,,
Radium barium chloride	-	one-tenth of a drop in ethereal solution.

Szendeffy injects the above, with ordinary antiseptic precautions, into the arm—one day into the right arm, the next day into the left. Drs. Bernheim and Dieupart, of Paris, prefer the nates as the site for injection, and they disinfect the skin by friction with a pledget of absorbent cotton-wool soaked in sublimate solution.

A dose of a cubic centimetre (16.9 minims, nearly) should be injected once a day during ten consecutive days; then one injection every second day until the tenth. Rest for a week or two, and recommence by a series of forty. Three or four series of injections may be made.

The treatment is most suited for subjects who are only slightly attacked—from the first to the second stages of the disease. Szendeffy recommends that the patient's temperature should be taken morning and evening—Report on Dioradin (Radio-active Menthol-Iodine) Treatment by Dr. S. Bernheim and Dr. Louis Dieupart in the *Revue Internationale de la Tuberculose*, May 24, 1911, and in the *Zeitschrift für Tuberkulose*, June, 1911.]

SANITARY AND METEOROLOGICAL NOTES.

Vital Statistics

For four weeks ending Saturday, October 7, 1911.

IRELAND.

The average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended October 7, 1911, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 19.6 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,149,495. The deaths registered in each of the four weeks ended Saturday, October 7, and during the whole of that period in the several districts, alphabetically arranged, correspond to the following annual rates per 1,000. In some cases, owing to deaths not having been registered within the week in which they occurred, the rates do not fairly represent the weekly mortality :—

Towns, &c.	Week ending				Average Rate for 4 weeks	Towns, &c.	Week ending				Average Rate for 4 weeks
	Sept 16	Sept. 23	Sept. 30	Oct. 7			Sept. 16	Sept. 23	Sept. 30	Oct. 7	
22 Town Districts	19.4	20.1	18.0	19.6	19.3	Lisburn	30.0	8.6	12.9	12.9	16.1
Armagh	6.9	13.7	13.7	6.9	10.3	Londonderry	11.5	12.8	19.2	7.7	12.8
Ballymena	27.5	13.8	4.6	22.9	17.2	Lurgan	43.0	21.5	4.3	8.6	19.3
Belfast	16.5	20.2	16.9	17.3	17.7	Newry	30.5	4.4	21.8	17.4	18.5
Clonmel	15.2	20.3	5.1	40.6	20.3	Newtownards	34.3	28.6	11.4	22.9	24.3
Cork	19.7	19.7	22.5	25.2	21.8	Portadown	22.2	8.9	—	13.3	11.1
Drogheda	12.6	12.6	16.8	37.8	20.0	Queenstown	26.4	6.6	13.2	13.2	14.9
Dublin (Reg. Area)	23.2	22.6	19.9	22.1	21.9	Sligo	4.7	4.7	4.7	28.0	10.5
Dundalk	4.0	27.8	7.9	7.9	11.9	Tralee	5.3	10.6	21.1	26.4	15.9
Galway	7.9	19.7	35.4	15.7	19.7	Waterford	20.9	24.7	11.4	19.0	19.0
Kilkenny	9.9	24.8	19.8	19.8	18.6	Wexford	13.7	9.1	22.8	9.1	13.7
Limerick	20.4	23.1	23.1	20.4	21.7						

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 22 districts during the week ended Saturday, October 7, 1911, were equal to an annual rate of 3.7 per 1,000, the rates varying from 0.0 in ten of the districts to 15.2 in Clonmel ; the 8 deaths from all causes for that district including 3 from *enteritis* under 2 years of age. Included in the 128 deaths from all causes in Belfast are 2 from enteric fever, one from scarlet fever, one from whooping-cough, and 18 from diarrhœal diseases. Among the 37 deaths from all causes in Cork are 5 from diarrhœa. Of the 15 deaths in Limerick 2 are from diarrhœa in children under 2 years, and included in the 10 deaths from all causes for Waterford are 4 from diarrhœa and *enteritis* of children under 2 years. Two of the 3 deaths for Lisburn are from diarrhœa in children under 2 years. Among the 5 deaths from all causes for Ballymena are one from scarlet fever and one from diarrhœa of a child under 2 years, and 2 of the 4 deaths from all causes for Newtownards are from measles.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock, and Kingstown. The population of this area is 403,732, that of the City being 309,738, Rathmines 38,330, Pembroke 29,347, Blackrock 9,090, and Kingstown 17,227.

In the Dublin Registration Area the births registered during the week ended October 7, amounted to 204—109 boys and 95 girls—and the deaths to 179—96 males and 83 females.

DEATHS.

The registered deaths, omitting the deaths (numbering 8) of persons admitted into public institutions from localities outside the Area, represent an annual rate of mortality of 22.1 per 1,000 of the population. During the forty weeks ending with Saturday, October 7, the death-rate averaged 21.6, and was 0.8 below the mean rate for the corresponding portions of the 10 years 1901–1910.

The total deaths registered, numbering 179, represent an annual rate of 23.1 per 1,000. The annual rate for the past forty weeks was 22.8 per 1,000, and the average annual rate for the corresponding period of the past ten years was 23.5 per 1,000 of the mean population for all deaths registered.

The registered deaths include 2 from enteric fever, one from scarlet fever, one from influenza, 32 from diarrhœa and *enteritis* in children under 2 years, and one death from diarrhœa of a person above 2 years of age. In the 3 preceding weeks, deaths from enteric fever were 2, 3, and 6; deaths from scarlet fever were 1, 3 and 1; deaths from influenza were 0, 0, and 0, and deaths from diarrhœa and *enteritis* of children under 2 years were 46, 44, and 28.

Tuberculous diseases caused 30 deaths, comprising 18 from pulmonary tuberculosis, 2 from tubercular meningitis, 4 from abdominal tuberculosis, and 6 from disseminated tuberculosis. In the three preceding weeks, tuberculous diseases caused 26, 14, and 19 deaths respectively.

Broncho-pneumonia caused 7 deaths, lobar pneumonia 3 deaths, and *pneumonia* (type not distinguished) 4 deaths.

There were 6 deaths from cancer.

The deaths of 2 children under 2 years of age were ascribed to *convulsions*.

Fifteen deaths were caused by organic diseases of the heart, and bronchitis accounted for 15 deaths.

Premature birth was the cause of death of 3 infants, and congenital debility caused 6 deaths.

There was one accidental death, and one death by suicide was also registered.

In one instance the cause of death was "uncertified," there having been no medical attendant during the last illness.

Sixty-eight of the persons whose deaths were registered during the week ended October 7 were under 5 years of age (47 being infants under one year, of whom 14 were under one month old) and 22 were aged 65 years and upwards, including 19 persons aged 70 and upwards. Among the latter were 11 aged 75 years and upwards, of whom two (females) were stated to have been each aged 90 years.

The Registrar-General points out that the names of the cause of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," and the "Tuberculosis Prevention (Ireland) Act, 1908," as se

forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health for the City of Dublin; by Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; by Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; by the Executive Sanitary Officer for Kingstown Urban District; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended October 7, 1911, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Small-pox	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Pyrexia (origin uncertain) *a*	Enteric or Typhoid Fever	Erysipelas	Puerperal Fever	Whooping-cough	Cerebro-spinal Fever	Tubercular Phthisis (*Phthisis*).	Total
City of Dublin	Sept. 16	–	*	*	22	–	–	18	–	–	26	10	–	*	–	12	88
	Sept. 23	–	*	*	27	2	–	5	–	–	33	7	–	*	–	9	83
	Sept. 30	–	*	*	25	–	–	8	–	2	33	9	–	*	–	4	81
	Oct. 7	–	*	*	25	1	–	5	–	2	35	3	–	*	–	5	76
Rathmines and Rathgar Urban District	Sept. 16	–	*	*	–	–	–	2	–	–	1	1	–	*	*	*	4
	Sept. 23	–	*	*	–	–	–	–	–	–	1	2	–	*	*	*	3
	Sept. 30	–	*	*	–	–	–	1	–	–	–	–	–	*	*	*	1
	Oct. 7	–	*	*	2	–	–	1	–	–	–	–	–	*	*	*	3
Pembroke Urban District	Sept. 16	–	–	–	1	–	–	–	–	–	–	–	–	4	–	–	5
	Sept. 23	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Sept. 30	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	2
	Oct. 7	–	–	–	2	–	–	–	–	1	–	–	–	–	–	–	3
Blackrock Urban District	Sept. 16	–	*	*	–	–	–		–	–	–	–	–	*	–	*	–
	Sept. 23	–	*	*	3	–	–	–	–	–	–	–	–	*	–	*	3
	Sept. 30	–	*	*	–	–			–	–	–	–	–	*	–	*	–
	Oct. 7	–	*	*	2	–	–	–	–	–	–	–	–	*	–	*	2
Kingstown Urban District	Sept. 16	–	*	*	–	–	–	–	–	–	2	–	–	*	*	–	2
	Sept. 23	–	*	*	–	–	–	–	–	–	2	–	–	*	*	–	2
	Sept. 30	–	*	*	1	–	–	–	–	–	–	1	–	*	*	1	3
	Oct. 7	–	*	*	1	–	–	–	–	–	–	–	–	*	*	–	1
City of Belfast	Sept. 16	–	*	*	12	–	–	7	–	1	5	6	–	*	–	4	35
	Sept. 23	–	*	*	16	–	–	3	1	2	2	1	–	*	–	3	28
	Sept. 30	–	*	*	24	–	–	13	–	–	8	3	–	*	–	8	56
	Oct. 7	–	*	*	25	–	–	5	–	2	2	7	–	*	–	9	50

a Continued Fever.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended October 7, 1911, 9 cases of measles were discharged from hospital, and 2 cases remained under

treatment at the close of the week. In the 3 preceding weeks such cases had been 7, 12, and 11, respectively.

Thirty-eight cases of scarlet fever were admitted to hospital, 17 were discharged, there was one death, and 131 cases remained under treatment at the close of the week, exclusive of 21 convalescents from the disease who were still under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the 3 preceding weeks the cases in hospital were 84, 102, and 111, respectively.

One case of typhus was admitted to hospital during the week, and 3 cases remained under treatment at its close.

Ten cases of diphtheria were admitted to hospital and 7 were discharged. The cases in hospital, which at the close of the 3 preceding weeks numbered 38, 35, and 39, respectively, were 42 at the close of the week under discussion.

Thirty-seven cases of enteric fever were admitted to hospital: 7 were discharged, there were 3 deaths, and 145 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the 3 preceding weeks being 82, 96, and 118.

In addition to the above-named diseases, 3 cases of pneumonia were admitted to hospital, 5 were discharged, there was 1 death, and 11 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, October 7, in 77 large English towns (including London, in which the rate was 15.0), was equal to an average annual death-rate of 15.2 per 1,000 persons living. The average rate for 8 principal towns of Scotland was 14.9 per 1,000, the rate for Glasgow being 14.9, and that for Edinburgh 15.4.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended October 7. From this Report it appears that of a total of 56 cases notified, 25 were of scarlet fever, 19 of phthisis, 10 of diphtheria, and 2 of erysipelas. Among the 306 cases of infectious diseases in hospital at the close of the week were 158 cases of scarlet fever, 56 of phthisis, 48 of diphtheria, 18 of whooping-cough, 7 of erysipelas, 4 of chicken-pox, 4 of enteric fever, and 2 of measles.

Meteorology.

Abstract of Observations made in the city of Dublin, Lat. 53° 20′ *N., Long.* 6° 15′ *W., for the Month of September*, 1911.

Mean Height of Barometer, - - -	30.053 inches.
Maximal Height of Barometer (15th, at 9 p.m.),	30.414 ,,
Minimal Height of Barometer (20th, at 9 p.m.),	29.368 ,,
Mean Dry-bulb Temperature, - -	55.3°.
Mean Wet-bulb Temperature, - -	52.6°.
Mean Dew-point Temperature, - -	50.0°.
Mean Elastic Force (Tension) of Aqueous Vapour	.364 inch.
Mean Humidity, - - - -	82.8 per cent.
Highest Temperature in Shade (on 5th), -	73.1°.
Lowest Temperature in Shade (on 21st), -	41.7°.
Lowest Temperature on Grass (Radiation) (16th),	37.9°.
Mean Amount of Cloud, - - -	46.3 per cent.
Rainfall (on 11 days), - - -	1.007 inches.
Greatest Daily Rainfall (on 25th), - -	.371 inch.
General Directions of Wind, - -	W., N.W., S.W.

Remarks.

The magnificent summer of 1911 lasted well into September, the first twelve days were extremely fine and warm, save that heavy thunder showers fell in Dublin on the morning of the 4th. On the 8th the thermometer rose to 94° at Greenwich and Raunds (Nottinghamshire), to 93° at Cambridge and to 91° at some stations in both the S.E. and S.W. of England. The highest reading in Ireland during this warm period was 82° at Killarney on the 7th. During all this fine, summerlike period, the barometer stood high over the southern half of the British Isles and Central Europe, whereas depressions passed from Iceland across Northern Europe. In the second week temperature gave way, owing to the arrival of a shallow depression from the Bay of Biscay which determined the setting in of a northerly air current. Rain fell in Dublin on the night of the 11th, and thunderstorms prevailed over the north of England on that day. The third week (17th 23rd), opened with fine dry weather; but a decided change soon took place. On Tuesday the 19th, an atmospheric depression advanced towards the British Isles from Iceland, and with its rains and fresh or squally W. to N.W. winds temperature fell.

so that the week proved colder than the average—a condition which had not happened since the closing week of June. On Sunday the 24th a depression, with the barometer down to 28.62 inches at Seydisfjord, was found off the south-east of Iceland. The secondaries of this system passed over the United Kingdom, throwing the weather into a cold, showery condition. On the 25th no less than 3 inches of rain fell at Roche's Point, Cork Harbour. In Dublin there were registrable rainfalls on 9 out of the last 12 days of the month, whereas only 2 out of the first 18 days were rain-days. The brisk autumnal fall of temperature may be gauged by the weekly means recorded in Dublin—namely, 60.6°, 55.7°, 53.5°, 52.7°.

In Dublin the arithmetical mean temperature (56.5°) was 0.6° above the average (55.9°); the mean dry-bulb readings at 9 a.m. and 9 p.m. were 55.3°. In the forty-seven years ending with 1911, September was coldest in 1886 and 1892 (M. T. = 53.0°), and warmest in 1865 (M. T. = 61.4°) and 1898 (M. T. = 60.2°). In 1910 the M. T. was 55.8°.

The mean height of the barometer was 30.053 inches, or 0.143 inch above the corrected average value for September—namely, 29.910 inches. The mercury rose to 30.414 inches at 9 p.m. of the 15th, and fell to 29.368 inches at 9 p.m. of the 20th. The observed range of atmospheric pressure was, therefore, 1.046 inches.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 55.3°, or 6.7° below the value for August, 1911. Using the formula, *Mean Temp.* = *Min.* + (*Max.* — *Min.* × .476), the mean temperature was 56.2°, or 0.5° above the average mean temperature for September, calculated in the same way, in the thirty-five years, 1871–1905, inclusive (55.7°). The arithmetical mean of the maximal and minimal readings was 56.5°, compared with a thirty-five years' average of 55.9°. On the 5th the thermometer in the screen rose to 73.1°—wind, W.; on the 21st the temperature fell to 41.7°—wind, W. to N.N.W. The minimum on the grass was 37.9° on the 16th.

The rainfall was 1.007 inches on 11 days. The average rainfall for September in the thirty-five years, 1871–1905, inclusive, was 2.210 inches, and the average number of rainy days was 15. In 1871 the rainfall was very large—4.048 inches on, however, only 13 days; in 1896 no less than 5.073 inches fell on 23 days,

establishing a record rainfall for September. On the other hand, in 1865, only .056 inch was measured on but 3 days. In 1910 only .726 inch fell on 10 days.

High winds were noted on 6 days, but never attained the force of a gale. A lunar halo was observed on the 10th and 12th, and a solar halo on the 28th. Fog occurred on the 6th, 7th, and 21st. Thunder was heard on the 4th, and lightning was seen on the 20th.

The rainfall in Dublin during the nine months ending September 30th amounted to 12.599 inches on 120 days, compared with 25.108 inches on 159 days in 1910, 18.493 inches on 134 days in 1909, 19.557 inches on 154 days in 1908, 17.140 inches on 153 days in 1907, 16.121 inches on 146 days in 1906, 19.266 inches on 145 days in 1905, 19.147 inches on 152 days in 1904, 25.269 inches on 174 days in 1903, 21.425 inches on 149 days in 1902, 18.070 inches on 124 days in 1901, only 10.968 inches on 112 days in 1887, and a thirty-five years' average of 20.160 inches on 146 days.

At the Normal Climatological Station in Trinity College, Dublin, the observer, Mr. C. D. Clark, reports that the mean height of the barometer was 30.057 inches. The range of atmospheric pressure was between 30.410 inches at 9 p.m. of the 17th and 29.375 inches at 9 p.m. of the 20th. The mean value of the readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 56.4°. The arithmetical mean of the daily maximal and minimal temperatures was 56.3° The screened thermometers rose to 75.3° on the 5th, and fell to 40.0° on the 21st. On the same date the grass minimum was 29.5°. Rain fell on 11 days to the amount of .990 inch, the greatest fall in 24 hours being .415 inch on the 25th. The duration of bright sunshine, according to the Campbell-Stokes recorder, was 148.5 hours, of which 11.1 hours occurred on the 1st. The mean earth temperatures were—at 1 ft., 58.3°; at 4 ft., 58.6°. The one-foot thermometer ranged from 61.7°, on the 2nd, 3rd and 4th, to 54.0° on the 29th. The four-feet thermometer ranged from 60.0°, on the 1st, 2nd, 3rd, and 4th, to 56.4 on the 30th.

At 21 Leeson Park, Dublin, Dr. Christopher Joynt, F.R.C.P.I., registered 1.190 inches of rain on 11 days, the greatest fall in 24 hours being .355 inch on the 25th. Up to September 30, the rainfall at this station was 13.209 inches on 115 days.

At Manor Mill Lodge, Dundrum, Co. Dublin, Mr. George B. Edmondson recorded a rainfall of .96 inch on 11 days, the greatest fall in 24 hours being .39 inch on the 25th. The shaded thermometer rose to 73° on the 5th, 6th, 7th and 11th, and fell to 43° on the 29th. The mean temperature in the shade was 56.8°.

Mrs. Olive F. Symes reports that the rainfall at Druid Lodge, Killiney, Co. Dublin, was .50 inch on 8 days, the maximum being ·33 inch on the 25th. The average September rainfall at Cloneevin, Killiney, in 24 years (1885–1908) was 1.961 inches on 12.9 days.

Mr. T. Bateman reports that the rainfall at The Green, Malahide, Co. Dublin, was 1.025 inches on 12 days, the greatest fall in 24 hours being .455 inch on the 25th. The mean shade temperature was 53.8°, the extremes being—highest, 72.5° on the 5th; lowest, 36° on the 30th.

At Ardgillan Castle, Balbriggan, Co. Dublin, 210 feet above sea-level, Captain Edward Taylor, D.L., measured .81 inch of rain on 10 days, the rainfall being 1.20 inches below the average and the rain-days being 3 in defect. The total rainfall from January 1, amounts to 16.32 inches on 119 days. The rainfall is 4.46 inches and the rain-days are 19 in defect of the average. The maximal temperature in the shade was 73.9° on the 5th, the minimum was 38.0° on the 21st.

At Cheeverstown Convalescent Home, Clondalkin, Co. Dublin, Miss C. Violet Kirkpatrick and Miss Eleanor M. Moore recorded a rainfall of 1.52 inches on 14 days, the maximal fall in 24 hours being .49 inch on the 11th.

The rainfall recorded at the Ordnance Survey Office, Phœnix Park, was 1.268 inches on 11 days, the greatest measurement in 24 hours being .435 inch on the 25th. The total amount of sunshine at this station was 152.9 hours, the most registered on any one day being 12.0 hours on the 1st.

At Clonsilla, Greystones, Dr. W. Stewart Ross recorded a rainfall of 1.59 inches on 11 days. The greatest rainfall in 24 hours was .60 inch on the 25th. Temperature was highest (76°) on the 12th, lowest (40°) on the 22nd. The mean temperature was 55.8°, the mean maximum being 63.7°, the mean minimum, 47.9°.

Dr. J. H. M. Armstrong, M.B., reports that at Coolagad, Greystones, Co. Wicklow, the rainfall was 1.76 inches on 13 days, The heaviest fall in 24 hours was .61 inch on the 25th. At

Coolagad the rainfall since January 1st, 1911, has been 13.34 inches on 106 days.

Dr. Charles D. Hanan, M.B., reports that at the Royal National Hospital for Consumption for Ireland, Newcastle, Co. Wicklow, rain fell to the amount of 1.92 inches on 11 days, the heaviest rainfall in 24 hours being .88 inch on the 25th. The screened thermometers rose to 74.6° on the 5th, and fell to 41.9° on the 21st. The mean maximum temperature was 61.6°, the mean minimum 48.3°, and the arithmetical mean temperature 54.9°.

The Rev. Arthur Wilson, M.A., returns the rainfall at the Rectory, Dunmanway, Co. Cork, at 4.29 inches on 16 days, the heaviest falls in 24 hours being 1.15 inches on the 11th, and 1.17 inches on the 25th. Of the latter amount .85 inch fell in 2½ hours. The rainfall of September at Dunmanway was 1.46 inches over the average of the last 6 years (2.83 inches). The total fall in the 9 months of 1911 has been 37.64 inches, or .65 inch more than the average of the same period in the last 6 years (36.99 inches). The first 9 days of the month were very fine and warm. The weather was also very fine, but cooler, from the 12th to the 18th.

Mr. Wm. Miller states that in the City of Cork the rainfall was 2.58 inches on 13 days, or 0.10 inch and 3 days short of the average for September. The rainfall was greatest on the 25th, when 0.83 inch was measured. In the 9 months ended September 30, the rainfall was 20.70 inches on 116 days, or 5.40 inches and 22 days less than the average.

At Derreen, Kenmare, Co. Kerry, Mr. W. Holbrow registered a rainfall of 5.72 inches on 13 days, the heaviest fall in 24 hours being 2.58 inches on the 11th. On that day 1.22 inches fell in 1 hour and 10 minutes. With the exception of this downpour of rain, the weather was fine from the 1st to the 19th. The remainder of the month was showery and cold.

TETANUS: SPASM OF THE GLOTTIS THE ONLY SYMPTOM PRESENT. MM. Iriboulet et Harvierb (*La Quinzaine Therapeutique*, July 10, 1911), at the Société de Pediatrie, reported a case of tetanus in an infant at the breast, in whom the only symptom of the disease was spasm of the glottis. The sign of Chvostak in particular was never present.

In Memoriam.

WILLIAM LANGFORD SYMES, M.D. Durh., F.R.C.P.I.

The death of Dr. Langford Symes, which occurred in London on Wednesday, September 13, 1911, came as a surprise to his many friends and patients in Ireland, for although he had been laid aside from work for over a twelvemonth it was not anticipated that he would not recover. Dr. Symes obtained the Licenses of the Royal College of Surgeons in Ireland and the Royal College of Physicians of Ireland in 1883. He then filled for a number of years the post of dispensary medical officer in Kiltegan, in his native county of Wicklow. In 1896 he left the Poor Law Medical Service, and sought to improve his position and to give a wider scope to his ability by studying diseases of children for several months in London in the Great Ormond Street Hospital for Sick Children. Subsequently he established himself in Merrion Square, Dublin, as a specialist in this subject. He became Assistant Physician to the Dublin Orthopædic Hospital and Physician to the Homes for Destitute Children. In 1898 he was admitted to the Fellowship of the Royal College of Physicians of Ireland, and subsequently became a Censor and Examiner in the College. For several years he edited the Journal of the Irish Medical Association, and during this period contributed many valuable articles to its pages on the diseases and feeding of children. To the pages of this Journal also he contributed periodical Reports on Diseases of Children. He was a member of the Council of the Dublin Sanitary Association. He was a Fellow of the Royal Academy of Medicine in Ireland and a frequent contributor to the pages of its Transactions. He passed the examination for the M.D. of Durham in 1902. His attendance on the children of the Earl of Dudley (during the period of this Nobleman's Viceroyalty) brought him into prominence as a consultant.

In Memoriam.

Three years ago Dr. Langford Symes's health began to suffer. He underwent a serious operation, which relieved him from the symptoms of duodenal ulcer, and from which he made an excellent recovery. He anticipated that his removal to the salubrious surroundings of Llandrindod Wells would permanently benefit his health, and accordingly, with no little misgivings, he unfastened the professional and friendly ties which bound him to Dublin, and made a fresh start in his medical life by establishing himself as a physician in the above-named health resort. Here he was succeeding beyond his expectations when illness again overtook him. He was removed to London, and for quite a twelvemonth was under treatment there. During this time breaks occurred in the gathering gloom which gave hopes of recovery to his friends, but on Monday, September 11, acute symptoms developed, to which he succumbed on the following Wednesday.

Dr. Symes was a painstaking, kindly, and capable physician, whose early demise will be lamented by many friends and patients in Ireland.

His contributions to medical literature were numerous, and included:—

"Hyperpyrexia in Rheumatic Fever." *Dublin Journal of Medical Science*, 1886.

"Pleural Effusion with Displacements of the Heart." *Ibid.*, 1892.

"Tracheotomy in Cellulitis of the Neck." *Ibid.*, 1892.

"Thrombosis and Embolism in Fatty Heart." *Ibid.*, 1892.

"On a Pythogenic Form of Glossitis." *Ibid.*, 1892.

"On Hiccough." *Ibid.*, 1892.

"Clinical Lessons of Intestinal Obstruction." *Medical Press*, 1892.

"Dissection of Semicircular Canals in Birds." *R. C. S. Museum*, 1892.

He compiled a leaflet on "The Laws of Public Health" and another on the "Feeding of Infants."

James Craig.

PERISCOPE.

TROPICAL ABSCESS OF THE LIVER.

In a paper on tropical abscess of the liver, by Mr. Uddhav Sackharam, of the 129th Baluchis (*Indian Medical Journal*, Vol. V., No. 6), the following statistics are given :—23,516 cases of dysentery occurred during the years 1902-3-4-5 in the Indian Army ; and of these 72 suffered from abscess of the liver, giving a ratio of 3 per 1,000. During the same period there were 5,581 cases of dysentery in the British Army in India, and of these 860 suffered from abscess of the liver, a ratio of 154 per 1,000. The native soldier is said to be seventeen times less liable to hepatitis and twenty-five times less liable to liver-abscess than the British soldier. Among native sliver-abscess is not a sequal to dysentry. At the *post-mortem* examinations, very frequently the gut has been found absolutely normal in deaths from liver abscess. Among Indians, although dysentery is common, abscess of the liver is rare, whilst among Europeans it is the reverse ; in Senegal liver abscess is fatal, but dysentery is not common, while in Jamaica and Logos dysentery is prevalent, but liver abscess is rare.

"CLEAN-UP DAY" CALENDAR, 1912.

In many towns in the Tropics, the municipal authorities have declared one day in each week to be "Clean-up Day," so as frequently to remind citizens of their duty as regards the collection and removal of household rubbish, and other refuse which favours mosquito breeding. The "Clean-up Day" Calendar for 1912 has been prepared with the object of assisting the Anti-Mosquito Campaign in tropical cities and towns, and Wednesday is the selected "Clean-up Day." This ingenious calendar was suggested by an able Irish physician, an alumnus of the University of Dublin, who is stationed at Freetown, Sierra Leone, West Africa. It is one of the tropical places at which "Clean-up Days" have been declared, and Wednesday was the day selected at that place. Similar calendars may be obtained by order from Messrs. M'Caw, Stevenson & Orr, 31 and 32 Shoe Lane, London, E.C., at a cost of 67s. 6d. per 100 for 500, 48s. per 100 for 1,000, and 32s. 6d. per 100 for 5,000. If the name of the selected day be omitted, and "Clean-up Day" substituted, the cost will be somewhat greater.

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PART I.

ORIGINAL COMMUNICATIONS.

ART. XIV.—*The Need of Medical Inspection of School Children in Ireland.*[a] By OLIVER ST. JOHN GOGARTY, M.D. Univ. Dubl.; F.R.C.S.I.; Surgeon to the Meath Hospital and County Dublin Infirmary.

IT has been an old custom of this Hospital to deliver an address at the commencement of the Winter Session. This custom has been discontinued for the last few years for some reasons, and now that the lot has fallen on me I am inclined to think it was more a want of temerity than of good intention that caused my colleagues to cease to furnish an Opening Address. For at the present moment no one is in a better position than I am to judge of the amount of courage it takes to face so distinguished an audience. In the London hospitals the custom is not discontinued, and it serves a useful purpose, inasmuch as it allows the reading public to judge of the general advance and relationship of Medicine to current affairs, as well as of the attitude of the Medical Profession towards important questions of the day.

[a] An Address introductory to the Winter Session, 1911-12, of the Meath Hospital and County Dublin Infirmary.

I have availed myself of this opportunity to bring under professional and public notice a question, the urgency and importance of which it would be hardly possible to exaggerate. I refer to the need of medical inspection of the schools in this country. Though I am by no means the first person to speak on this subject, I am, perhaps, the first who has had the opportunity and privilege of bringing the question under the notice of so important a gathering. Whenever this question has been raised before, as it has been, it has been met either with apathy, as if it were no one's concern, or by the equally inexcusable method of bringing forward a difficulty so supposedly insurmountable as to suggest that all complaints should be hushed. All of whom I have met readily agree that there is a need, but they proceed to overwhelm me with the question, "Where is the money to come from?" My answer to that is, first, "From the increased efficiency of the schools themselves, and the money saved to them by medical inspection. For there is a large percentage of children at the present time who, for the want of medical attention, are utterly incapable of benefiting, or of even being reached, by education. And, secondly, from the source that provides the money to support the schools—a source which, though called the Treasury, is really in the end the country itself. For all Treasury money comes out of the country. Ireland is the only civilised country which, while providing money to the Treasury for schools, receives in return no guarantee that the schools will not be a menace to the health of the children. If there be money enough to supply and support schools, and to make attendance at them compulsory, we should be better off without the schools, if, through being neglected, they become a danger to those who are bound by law to live in them during the most important and susceptible periods of their lives.

This first point I hope to demonstrate. As for the second point—that uninspected schools become a menace to the public health—this has been already, and but lately, demon-

strated, and in a way more emphatic than words could make it. I refer to the action of the Health Authorities in this city during the recent outbreak of scarlatina—their first action was to close the schools. We cannot expect parents to consider themselves indebted to those who only furnish the means of taking their children from their homes and huddling them together with unhealthy and diseased children where there is no means of knowing whether they are exposed or not to contagious or infectious diseases until these diseases have already made their appearance—that is, until after the event. Therefore, I say that the money that does this without safeguarding the children is superfluous and badly spent, insomuch as it is more important that children should be healthy than that they should be capable of reading or writing. For bear in mind that it is not with the children who live by reading and writing that we have to deal, but with the children of the labouring classes, whose only asset is their health. And this health is daily endangered in the quest of knowledge that frequently is ungainable, and often, if gained, not worth the risk. I fight not with learning, but with the inability to learn which results from preventable and unrecognised disease.

I am disinclined to employ as an argument the fact that every civilised country but our own has its school children medically inspected, because whether it has or not is no reason why, if it be necessary, the school children of this country should not have this advantage. But I will mention that since 1874 Brussels has had a systematic medical inspection of schools, and Paris since 1884. There are scientific journals in France and Germany devoted exclusively to the subject of this movement, which is also a national one in Switzerland, Sweden, Belgium, Bulgaria, the Argentine Republic, Japan, and England. In this country the fight will be more difficult, because we cannot count on parents demanding that their children's health should be protected during the long hours of their schooling. In Ireland the parents, I will not say out of apathy

(for apathy is an unhappy word in the face of so much pathology), but out of ignorance and the patience born of ignorance, have come to take it for granted that certain diseases are inseparable from child life, and "the sooner they are over the better." Measles, scarlatina, whooping-cough, and diphtheria must be "got shut of" before a child has cleared the decks for active warfare with the world. Each and every one of these diseases can and should be prevented. But these are diseases which make themselves manifest, diseases with a reputation that whenever they come in epidemic form result, in this country, in closing the schools. There is a far more common and chronic disease which is not at all generally recognised, which besets a great proportion of school children, which exercises unobtrusively its disastrous effects through part or the whole course of a school child's career, and which is always a contributory, if not, indeed, a direct cause of all the other disorders I have mentioned: in fact, it is behind nearly every disease of school life. Before I go at length into the subject of this ailment I will read some statistics from the Report of the Medical Officer of the Educational Committee of the London County Council, taken from the *Times* of October last, for they cannot be obtained in this country:—

"Of the children examined in full detail there were recorded in the report the results of 37,420 examinations, with 12,656, or 33 per cent., requiring medical treatment. These represented chiefly children at all ages. Of the 172,619 children examined in 1910, and noted in detail, 52,954, or 32 per cent., received advice cards. The proportion of children who will be selected by the doctors after examination and given advice cards can now be fixed on the basis of the last two years at 65,610 out of 210,036—that is, 32 per cent., or approximately one-third of those examined. Of the 172,619 children recorded, 81,151 were returned as normal—that is, free from any definite organic effect. Bad effects of vision or eye diseases were recorded in 18,923 cases. Defects of throat or nose in

29,927, defects of ears or hearing in 9,499, and skin diseases in 2,913 (this included 453 ringworm cases found by the doctors), ringworm cases being generally excluded by the nurses. Other diseases were recorded in 15,296 cases."

It will be seen by this that one child in every three required medical treatment. If this be the case in inspected schools, we can but surmise that the proportion will be a larger one in our schools, where there is neither medical inspection nor any person empowered with authority to prevent verminous and feverish children from associating with the others during the long fasting hours of school attendance, or to examine and exclude suspected cases.

Looking again at the report I have quoted, it will be seen that by far the most common defect is associated with the nose and throat—29,927—almost as many as all the other ailments put together. And now I will proceed to examine and explain, as far as I can, the significance of the preponderance of this defect.

In order to make my task easier it will first be necessary to describe the normal function of the nose and throat, so that the defect of any departure from this may be appreciated.

The Nose.—The nose, revolutionary as the statement may appear, is primarily and essentially an organ of respiration. The nose is the commencement of the respiratory tract. It is the nose that first comes in contact with the outer air as it is drawn into the lungs. Inside the nose are two shelves, by which the air must pass on its way to the lungs. These shelves are for the purpose of preparing the indrawn air, so that it may reach the lungs in a suitable condition. These shelves cannot cool warm air, they have very little time to heat cool air; but they can supply indrawn air with the requisite amount of moisture. (That the nose is a moisture-maker I do not think any one will find it hard to believe if his memory can reach back to his last cold in the head.) The nose, then, changes the outer air—in fact it is the great climate-maker for the lungs.

Now, if a child breathes, not through the nose, but through the mouth, the mouth gives up its moisture to the air and becomes dry, until, after a while, it becomes provided with little moisture-making islands which increase as evaporation goes on; in fact, the mouth endeavours to become a climate-maker like the nose. Meanwhile, the normal tissue in the nose keeps on making its moisture, but as there is no air passing in to use this up the nose becomes over-laden with moisture, and the child has all the effects of an everlasting cold in the head. Every child at one or more times in the year becomes a mouth-breather when it has a cold. Some children are mouth-breathers all the year through, some all through their school career, and ever afterwards.

Cause of Mouth-breathing.—At the back of the nose there is a mass of spongy lymphoid tissue which, when swollen, is spoken of as "adenoids." When this occurs it partially or completely blocks up the nose, diverting the air through the mouth.

Effects of Mouth-breathing upon a Child.—First: *mechanical.*—If the mouth remains open the lower jaw is dropped, with the result that the cheeks weigh against the sides of the plastic growing palate, and tend, through long-continued influence, to push the upper gums inwards, so that the upper jaw becomes, not arched, but flat-sided, and its development is impeded. There is not room enough for the teeth in their order. They become lapped, crowded together, and misplaced. The palate, instead of being broad like a Norman arch, becomes high and narrowed like a Gothic one. Meanwhile, the lower jaw suffers, the muscles which pull down the chin are undeveloped, the chin itself does not develop, and it becomes a virtual impossibility to close the mouth for any length of time. The teeth in both jaws suffer. On account of the way they are crowded together the blood supply that keeps them healthy is interfered with, they are chilled by the mouth-breathed air, and decay is very rapid. We can now add bad teeth to the score of mouth-breathing defects.

Still keeping to the deformity caused mechanically, let us examine the chest of the mouth-breathing child. During the day the child has no difficulty in breathing through the mouth, but when it is asleep, and nature reverts to the natural tendency to draw in the air *viâ* the nose, a difficulty is met with in the impeded and undeveloped nostril (for anything that ceases to be used in nature ceases to develop). The chest gives way before the strain of sucking in air against increased resistence, with the result that the ribs cave in below the breast, the chest becomes flat-sided, and the breast bone comes forward to assume the shape which we call "pigeon-chest." The suffocating child shrieks in its sleep, or sleeps but at intervals, and he may have convulsions, for he is awakened every time sleep relaxes the palate, which falls back overweighed by enlarged tonsils.

This difficulty of drawing in air does not stop short of affecting the chest. The ears, which communicate with the back of the nose by two tubes, which are for the purpose of balancing the air-pressure on the inner side of the drums, are affected, thus adding deafness to the score of mouth-breathing.

Physiologically.—The effect of mouth-breathing is to cause congestion, the adenoid mass acting as a reservoir clogs the circulation of the nose. Circulation of the blood in a space intimately connected with the circulation in the brain becomes interfered with, the child suffers from headache and giddiness and stupidity, and a condition which I will emphasise later on ensues. But all the time the blood in the child's body is insufficiently aerated. The child becomes anæmic. Nutrition is interfered with. Growth and general development are retarded. There are continually recurring colds in the head: and oftentimes feverish attacks from septic absorption of the nose. It is useless to send one of these children away for change of air if he is not first surgically attended, for were he to be sent to the most salubrious climate in the world he cannot escape from the climate he carried with him—his half-

choked lungs and unfreshened blood. His speech and voice production are hampered and embarrassed. The movement of the palate is interfered with, and the sounding-board which the face makes is cut off from the voice. His throat, being delicate, is open to those scourging fevers of child life, all of which enter the system through the nose and throat—measles, diphtheria, and scarlatina. If the child escapes the fevers and their effects he cannot escape the bent back, slouching gait, and other bodily deformities and disabilities caused by unchecked mouth-breathing. If he does not suffer from chronic bronchitis he may be left at best with an impaired physique, for which a transient knowledge of the rule of three is little compensation.

In this city of street stables (there are 228 open stables or hazards in Dublin) and small cobble stones, which create an irritating, stony dust when chipped by traffic, there is less chance of escape from chronic pulmonary disease than in other and better ordered towns. It is here in the schools that the soil is prepared for the tuberculosis of adult life. And it is the school children that should be protected by those who would save the nation from what has come to be regarded as our national disease. A system that would protect the health of the children and save them from tuberculosis would have, if none other, the advantage of beginning at the right end and treating the cause and not the effect.

Mental.—I have said enough, perhaps more than enough, to show that there is fitting material for medical inspection in our primary schools and conditions which make all attempts at teaching children futile if persisted in. I refer to what the knowledgeable doctors of old termed "aprosexia"—inability to fix the attention. Memory is a direct record of the interest which a subject arouses. An inattentive child has no memory, he is hardly conscious of his surroundings. Teaching the listless is like winnowing air. This is what I had in mind when I said that increasing the efficiency of the schools would be

worth all the expense which medical inspection must involve. It would restore at least 11 in 100 to the rôle of teachable children and useful citizens. The inmates of our deaf and dumb asylums would be in number accordingly decreased. And, though I say this with less assurance, I think that I may venture the opinion that early attention to children's health, and correction of this disease, might keep many a one from that saddest of underworlds—a child's asylum.

Now, there are in Ireland, according to the figures of the last published Census, 602,209 children attending the primary schools, and 34,568 children attending other schools. This gives a total of 636,777 school children in Ireland.

There are 107,550 school children under the age of six years, 490,890 between the age of six and fourteen, and between fourteen and eighteen years 20,000.

The pupils receiving primary education are divided thus :—Boys, 313,107 ; girls, 318,967.

Last year the Treasury grant was £1,632,000 for all classes of education—primary, secondary, and university—in Ireland. The grant for Scotland was £2,250,000. There is thus a disparity between the grants for Ireland and Scotland. But there is a still greater disparity to be found at home. The grant for the Royal Irish Constabulary and the Dublin Police was £1,463,000. There are 12,000 policemen, so that one policeman costs as much as the education of forty-nine children. This number may be necessary ; and it is easy to see that they are necessary, and must continue to be necessary, in any country where less is paid for education than for police.

Here in the City of Dublin the average daily attendance at the City National Schools was 24,000 six years ago. According to the figures in the report I have read for the health of the English schools 8,000 of the pupils would require medical attendance or treatment. It would be interesting to know the daily attendance of children at all the dispensaries of the Dublin hospitals. This would

give some idea of the number actually ailing, though it would have nothing to say to the evil of the school system as it continues daily. The hours are far too long—9 30 a.m. to 3 30 p.m. at the earliest. The poorer children are left with a little piece of bread for lunch, even if they have as much as that. Some come breakfastless to school. Adults could not stand this treatment, much less could they assimulate learning, or fix their attention for half the time that is required of the children. We must not forget that the amount of disease in the world is daily and hourly rapidly increasing, because ethics and science are encouraging and increasing the duration of life. Lunacy is increasing in this country. The unfit are being propagated and preserved. There is neither law to protect the children nor law to save the future generation from unfit parents. Soon there will be no one healthy. But we must not deliberately hasten this morbid millenium. It may in some way be delayed, and the most important way of delaying it is to protect the rising generation. Feed the school children. The school children must be fed. I will not argue with any one who wants the use of meals explained to him. Slight as our chances are of obtaining "mens sana in corpore sano," they are futile—"in corpore inani." The children I have seen in the dispensaries of this and the Richmond Hospital were suffering children, and a great part of their sufferings and ailments could be traced to the continued strain of long and hungry hours on their childish system. Torturing with teaching a little starving child affects both its mind and body. I say nothing of the refinements of cruelty to which our stiff and tyrannical system of education may lead. The mothers who did not ask me to write notes exempting their children from school attendance were the mothers who had to work for their own and their children's support, and they had come to regard the school as a *crêche* where their children might be kept out of harm's way during the day. If they were kept out of harm's way well and good. But has not this mediæval system of

schooling not come to a pretty pass when the poorer class schools are chiefly patronised by those who wish to get their children out of the way? Perhaps if they had not this attractive feature they would not be tolerated.

But why are the school hours for children so long? Has there been any mystic relationship revealed to the school authorities, but hidden from all other authorities, between a child's power of learning and six hours of the twenty-four?

Added to this the further damaging fact that, according to the report of the Medical Inspector of the Local Government Board, it may be seen that the sanitary conditions of many of these schools are unsatisfactory—bad buildings, inadequate sanitary accommodation, defective ventilation. Out of the 167 schools, 21 have no playground, and 104 have no arrangements for ablution.[a]

Now, if I am met again with the answer—"Where is the money to come from that will pay to set all this right?" I can say: "Lessen by half the hours of school attendance, thereby save half the money, and protect the health of all the children. These children are the Nation of to-morrow. Save it."

The Greeks, than whom it is our habit to consider ourselves much more humane, had a custom which they later abolished, of exposing weak and undesirable infants. We gained one advantage from this custom—the Sophoclean trilogy.

But can it not be said that, after the lapse of years, in this country Christianity has revealed nothing better than a modern method of deserting or neglecting the growing child just as it becomes doubly dependent on us (because of the additional food required for its mind), just as the promised land of life is being revealed to it, and while it is looking only before, and its thoughts are all hopes? From this there is nothing to be gained. Besides, it is much inferior to the ancient method, and a blind and stupid one which neither reasons nor discriminates, but

[a] Bluebook. Thom. 1906.

exposes fit and unfit together. We are deliberately handicapping the rising generation with disease. This is what is happening every day in this country—we are exposing the children, and no amount of apathy or inactivity can lull our conscience from this fact and its significance.

ART. XV.—*An Obscure Case, simulating in some respects one of Henoch's Purpura.* By BERTRAM C. A. LEEPER, L.R.C.P.S.I. & L.M. (Rotunda); Senior Medical Officer, Earlswood Asylum, Redhill, Surrey.

THE curious form of purpura first observed by Dr. E. Henoch, of Berlin, in 1868, and described by him some years later ("Ueber eine Eigenthümliche Form von Purpura," *Berl. klin. Wochenschrift*, 1874, No. 51), is sufficiently rare to warrant the recording of the following case :—

CASE.—E. F., a nurse, aged twenty years, complained on the morning of July 5 of a rather severe occipital headache and a feeling of nausea. She had not actually vomited, but had on one or two occasions retched, and had an attack of pyrosis when I saw her. As it was her day "off duty" she had made arrangements to go to London, and said she would be all right, though advised to stop in bed. She had two attacks of vomiting in the train, and arrived at her destination in a collapsed condition, where she remained in bed till five o'clock, when she said she felt so much better that she would come back, which she did, and arrived at the Institution shortly after eight o'clock that evening. She was seen again, as she appeared much collapsed after the journey. She was vomiting (the vomit appeared of a bilious character), complained still of the headache, and, in addition, said she had abdominal pain, which, according to herself, was generalised. She was ordered calomel and aspirin, and after a time she seemed easier, and went to sleep.

Before stating any more facts about the case, a few items regarding her previous and family history might well be remarked on.

A cousin on her mother's side had symptoms of menin-

gitis a year ago, and, after being in bed five weeks, died suddenly. A brother of the patient, aged twelve, had an attack similar to that of the patient, with an intermittent temperature, vomiting, and purpuric rash; was allowed up when the temperature had been normal for five days. He was then taken suddenly ill, and died before he had been out of bed ten minutes. Her mother and father are healthy and alive. The patient, according to their statement, had always been healthy, and, except for being slightly anæmic, had never had a day's illness. No history of consumption or insanity in the family.

Next morning, after a fair night's sleep, the patient complained still of the headache, and also of pain in the right shoulder, which was found to be swollen and tender to the touch. Temperature 98.6°, pulse 72, respirations 16. Her bowels had moved, and there was a tinge of blood in the motions. At midday there appeared a rash, of a purpuric nature, over her legs and thighs, and there were four large spots on her abdomen. Her temperature commenced to rise, till by eleven o'clock that evening it was 104.6°, pulse 98, and respirations 22. She vomited several times during the day, the vomiting being chiefly of a bilious nature; but the last vomit contained some streaks of blood. Calcium chloride in 5-grain doses was ordered.

July 6th to 9th.—Remained in about the same condition, vomited twice in that time. Rash was still present. She appeared in a comatose state, and was aroused only with difficulty. Her temperature fluctuated between 102° and 104°, with a pulse-rate from 90 to 118 per minute.

July 9th.—Her temperature suddenly rose at midday to 105.6°, pulse-rate 134, respirations 28. She complained of a slight pain in her chest, in which, on very careful examination, a small patch of consolidation appeared in the middle lobe of the right lung. Up to this time there had been nothing detected in either lung. The violent pains in her head were still present, and œdema of the right shoulder and arm was present. The pain was so acute that the patient lay almost in a condition of opisthotonos, and she screamed when touched, though apparently in a comatose state. A large purpuric spot appeared over the right eyelid, and herpes was present on the right lip.

July 10th.—Patch of consolidation 5 inches by 3 inches

did not appear to have increased since the previous night. Vomited once in the night. Temperature 105°, pulse 124, respirations 22.

July 12th.—Lung symptoms cleared up. Slight abdominal colic was present, but patient appeared very much better. Rash disappeared, and also the head symptoms. For the first time albumen appeared in the urine, as previously only a heavy deposit of phosphates was present. Temperature 100°, pulse 86, respirations 20.

July 12th to 16th.—Patient progressing rapidly, temperature normal, pulse 72, respirations 18. Ordered very light diet.

July 18th.—Temperature rose suddenly to 104.8°. All the head symptoms reappeared, and another patch of consolidation was found in the same lung, but not in the same place, as the first one. There was no rash or vomiting present.

The patch of consolidation cleared up in two days, as before, and the patient gradually regained her normal appearance, but the temperature continued to fluctuate between normal and 102°. She lingered in this condition till August 9th, when she appeared to have a kind of convulsive seizure. Opisthotonos was present. Convergent strabismus and widely dilated pupils were noticed, and she died thirty-five days after the first symptoms appeared.

No *post-mortem* examination was permitted.

This case is interesting, in the first place, owing to the extreme fluctuation from day to day of the symptoms, and in the second place, if it was a case of Henoch's purpura, of its comparative rarity.

Another curious feature of the case was the appearance of the transient pneumonia, which also appeared on a second occasion, about eight days after the first patch had cleared up. Not many cases of this kind appear to have been noted, but one—a case of Dr. Day's, of Colchester—appeared in the *British Medical Journal* in 1909, and bore a striking resemblance to the present one. In fact, it differed only that there was a preponderance of intestinal colic present.

The lung symptoms in the present case were puzzling. Apparently the clinical condition of the middle lobe of the

right lung pointed to the presence of a lobar pneumonia: but the fact that the symptoms had cleared up in the space of thirty-six hours tended to disprove it, also the recurrence of a similar attack in eight days' time went also to disprove it.

It is evident that the lung symptoms were but a symptom of the original disease, and were due to a hæmorrhage into the alveoli of the lung.

Another noteworthy feature of the case was the extreme rapidity in which, after the rash and lung symptoms had disappeared, the patient recovered apparently from a very serious illness, till a secondary attack similar to the first absolutely prostrated her, and finally killed her.

ART. XVI.—*A Triad of Clinical Records.*[a] By SIR JOHN MOORE, M.A., M.D., M.Ch., D.P.H., Dubl.; D.Sc. (*Honoris Causâ*), Oxon.; F.R.C.P.I.; Senior Physician to the Meath Hospital and County Dublin Infirmary: Professor of Practice of Medicine in the Schools of Surgery, Royal College of Surgeons in Ireland.

AN apology on my part is due, and is herewith tendered, to the Fellows of the Royal Academy of Medicine in Ireland for trespassing upon their time and attention with a series of mere clinical notes. But the cases which I desire to report made a profound impression upon me, and their story may prove of some value, at all events to the younger members of the Academy, as a guide to diagnosis and treatment.

CASE I.—*Chronic Perihepatitis and Interstitial Hepatitis —Ascites, Jaundice, and Hæmatemesis.*—Mrs. Teresa O'K., aged thirty-four years, a clerk's wife, was admitted to the Meath Hospital under my care on April 8, 1909, with the signs and symptoms of purpura hæmorrhagica. She complained of a feeling of fulness in the abdomen, which was distended, and of a constant drowsiness.

[a] Read before the Section of Medicine in the Royal Academy of Medicine in Ireland, on Friday, November 10, 1911.

Her personal history was not very eventful. At the age of ten years she passed through scarlatina, and three years later through enteric fever. She was married at twenty-three, and bore five children, of whom four are alive. The fifth and last was stillborn in the year 1906.

When admitted, Mrs. O'K.'s pulse was 100, her respirations were 20, and her axillary temperature was 99.2°. During her stay of six weeks in hospital her condition was almost continuously subfebrile in the evenings—the highest reading recorded was 101° on the evening of May 2.

To illustrate the hæmorrhagic tendency which was present, I may mention that on April 11 the patient scratched a spot on her right cheek, with the result that there was free hæmorrhage. It was checked by the application of solution of ferric chloride. On April 28, the urinary examination gave the following result:—Quantity, 32 fluid ounces passed in twenty-four hours. Of a yellowish brown colour, acid reaction, spec. grav. 1018. Albumen and blood absent. No sugar. Excess of mucus.

The measurements of the abdomen at the level of the umbilicus were on April 30, 40 inches; May 8, 39½ inches; May 14, 38½ inches; May 20, 36¼ inches. She left hospital on the last-named day. While under observation her weight increased from 9 st. 10½ lbs. on April 26, to 10 st. on May 3. It then decreased with the absorption of ascitic fluid to 9 st. 8 lbs. on May 10, only a week later.

The patient left the Meath Hospital, relieved, on May 22, 1909. She was subsequently treated at the Coombe Hospital, where paracentesis abdominis was performed. The fluid, however, accumulated again shortly after she returned home.

Mrs. O'K. came under my care for a second time in January of the present year. On the 25th of that month she entered the Meath Hospital, deeply jaundiced. Her breath was very fœtid, owing partly to carious teeth, partly to a spongy state of the gums, which bled freely. There were a few spots of purpura on the body. She stated that her monthly periods had been irregular for some time, that she had been passing less water than usual, and that her skin was very itchy. She was wasted, but the abdomen was much distended, the umbilical depression being almost obliterated. The superficial veins were dilated

over the chest and abdomen. The flanks bulged when she lay on her back, and the other physical signs of ascites were present. She had a craving for alcohol, which had evidently been gratified by her husband and mother through mistaken kindness since her former stay in hospital. Periodical raving occurred at night. Both pulse and respirations were persistently quick. The axillary temperature was unsteady —the readings were generally slightly above normal, though not so high as they had been in 1909. On the evening of February 14, however, 101.4° was recorded. The urine was examined, but was normal save for the presence of bile. There was a fine tremor in the hands. The knee-jerks were present. On February 3, the girth round the abdomen at the level of the umbilicus measured 43½ inches. Paracentesis abdominis was performed on February 14, when 440 ounces of bile-stained serum were drawn off. The specific gravity of the fluid was 1020. It did not contain much fibrin or show other evidence of inflammation. Her weight after the tapping dropped from 10 st. 3 lbs. to 7 st. 10 lbs.

She left hospital on March 7, 1911, and I lost sight of her until Friday, October 6, 1911, when she came into hospital for the third and last time, with all the signs—subjective and objective—already mentioned present in an aggravated form. On admission, the axillary temperature was 98.8°: the pulse-rate was 108, and the respirations were 24. The night raving now amounted almost to mania. The abdomen was enormously distended, the protruding umbilicus forming a tumour as large as a tennis ball. The gums were bleeding, and she suffered from melæna. To quiet her at night, dilute hydrobromic acid was given, and to check the tendency to bleeding calcium lactate was exhibited in full—15-grain—doses.

The embarrassment to the heart's action and breathing became so great that paracentesis was done on October 10, no less than 580 ozs. of fibrino-serous exudation being drawn off.

Next day it was possible to examine and map out the liver by palpation and percussion. It was found to be much enlarged, projecting into the abdomen in the nipple line to the extent of 1½ to 2 inches. A hard nodule, or boss, was felt to the left of the xiphoid cartilage, and the surface of

the liver was granular or nodular in a marked degree, presenting the typical hob-nail feel of cirrhosis. Hæmatemesis and melæna now became frequent, and the patient gradually sank, and died early on the morning of St. Luke's Day.

The *post-mortem* examination was made a few hours after death by my colleague, Dr. Boxwell, who reports as follows on the findings:—

"There was very remarkable thickening of the capsules of the liver and spleen. The free surfaces were deeply pitted and indented. These pits could be distinctly felt through the abdominal wall, after removal of the fluid, and the sensation conveyed strongly suggested the irregularities of the typical 'hob-nail' liver. A glance at the specimen was enough to show that it was nothing of the kind. The irregularities were merely local depressions in the enormously thickened capsule, and did not extend into the underlying liver substance, the surface of which was comparatively smooth.

"The liver, however, showed microscopically a cirrhosis of an extreme degree. The new fibrous tissue cut through individual lobules in all directions, and contained multitudes of the so-called new-formed bile-ducts. A dissection of the larger biliary passages and the portal vein failed to disclose any gross obstruction.

"After a section of the upper free surface of the liver both air and blood could be freely expressed through the portal vein, and a probe passed easily through the common bile-ducts and appeared in the duodenum."

In the treatment of this case I did not try subcutaneous injections of fibrolysin. The *post-mortem* findings leave no room for regret in regard to this. Arguing from the fact that in interstitial hepatitis the function of the liver is disturbed by constricting bands analogous to cicatrical tissue, Moerlin, in an article entitled "Fibrolysin bei Hepatitis interstitialis," published in the *München med. Wochenschrift* in 1908 (Vol. LV., July 7, page 1435), and abstracted in *The Hospital*, Oct. 17, 1908, administered fibrolysin to a patient suffering from cirrhosis of the liver, injecting 2 cc. of the drug subcutaneously in the region of the liver two or three times a week. The affection was in the atrophic stage with commencing ascites. Iodide of

potassium and calomel had been tried in succession, but had proved useless. The patient stood the fibrolysin injections well. Shortly after the second injection he felt better, the output of urine was increased and the ascites diminished. The man was subsequently able to leave his bed, with improved appetite, and, after six injections, was able to resume work. Moerlin found that the liver had regained its normal size. In the course of treatment the patient was given Carlsbad salts and hydrochloric acid, but the great improvement was undoubtedly due chiefly to the fibrolysin. I understand that ampullæ are supplied for hypodermic or intramuscular injection containing 2.3 cc.s. apiece (nearly 40 minims of a solution of one molecule of thiosinamin and half a molecule of sodium salicylate).

Case II.—*Left Pleuro-pneumonia—Empyema-Thoracentesis—Recovery.*—On Saturday, July 8th, 1911, A. B., a lad of eighteen years, bathed while over-heated and tired. A "chill" followed, and he developed a fever which was regarded as influenza. He progressed favourably until the following Wednesday (July 12th), when he again became feverish, and Dr. Albert Croly detected the physical signs of a left pleuro-pneumonia. I was asked to see the patient in consultation with Dr. Croly on Saturday, July 15, the eighth day from the initial chill and the fourth of a declared pleuro-pneumonia. At this time the patient's tongue was thickly coated, there was a heavy smell from his breath, the abdomen was very tympanitic, though the bowels were regular. He had a troublesome cough, which caused left side pain. With some effort he brought up a viscid sputum, which only slightly partook of the rusty character. The pulse-rate was 96, respirations were 28 per minute, and the temperature in the mouth was no higher than 101.5°. The percussion note was hyper-resonant over the apex of the left lung, and the respiratory sound was rough and puerile, or compensatory. Posteriorly, there was a moderately large patch of dulness on percussion just below the scapula. Here also some fine crepitations were to be heard, with a distinct friction rub below. In front the percussion note was abnormally clear up to the fifth rib, as if the stomach was distended with gas, as I think it was.

What I did not like about the case was the trifling pyrexia on the fourth day of pneumonia, and also the presence of tympanites. These facts influenced me in replying to the lad's mother, who asked "When would the crisis occur?" I answered: "The case is not a straightforward one of pneumonia, or pneumonic fever, and we cannot look for a 'crisis.'" As a matter of fact, the fever dragged on, after two days of apyrexia, while remaining of moderate intensity. Dr. Croly very properly had the sputum examined bacteriologically for tubercle bacilli, but with a negative result. Nor did the blood give a positive Widal reaction. Our fears as to a possible tuberculosis or enteric fever were consequently allayed, but the patient's state remained unsatisfactory, and, indeed, steadily grew worse. He lost flesh and strength. His heart beat more rapidly, and the rate of the breathing rose to 40 or 44 in the minute. Dr. Croly shrewdly made a diagnosis of an encysted empyema on the left side.

On Sunday, July 30, I visited the patient, who was passing through his illness in the country a few miles south of Dublin—the main object of our consultation being to decide whether he could safely be removed to the epidemic wing of the Meath Hospital. Although at this time he was even gravely ill, the physical state of his heart seemed to justify his removal, and this was effected in an ambulance the following day, Monday, July 31. In the evening of this day the temperature rose to 103.2°—the highest recorded during the whole illness—the pulse was 98, and the respirations were 40.

On the afternoon of Tuesday, August 1, the patient's state was critical. He had paroxysmal fits of coughing, which caused extreme cyanosis, and so also did any change of position, especially to the right side. His breath was fœtid, so was the sputum, and the fœtor on coughing was like that of pulmonary gangrene. In the second and third left intercostal spaces an area of dulness on percussion existed, and the other physical signs suggested the formation of a gangrenous cavity in the lung. In the afternoon Dr. Alfred Parsons joined Dr. Croly and me in consultation, my hospital colleague, Dr. Lennon, being out of town. We agreed that there was no indication for thoracentesis at the time having regard to the patient's very weak condition, and

it was arranged that the very active treatment which I had adopted in the morning should be continued. Oxygen inhalations, hypodermic injections of one-sixtieth of a grain of sulphate of strychnine, and one-hundredth of a grain of digitalin, were given alternately, each at intervals of six hours. Ten minims of turpentine were taken in a little whisky and hot water every fourth hour. A teaspoonful of Jenner's syrup (liquor morphinæ, aqua laurocerasi, and syrupus aurantii) was taken when cough was troublesome, and 3 grains of salicylate of quinine were given every six hours.

A remarkable change in the physical signs now took place. On the morning of August 3, the greater part of the left side yielded an absolutely dull percussion note, and the heart was seen and heard to beat just outside the sternum on the right side. The dexiocardia had occurred with startling suddenness. It was as if an encysted pleural effusion had escaped into the left pleura at large. I felt that evacuation of the fluid was imperative if the patient's life was to be saved, and accordingly I asked my colleage, Mr. William Taylor, who was on duty in the hospital at the time, to see the patient with a view to operation. He kindly came at once. An exploratory puncture gave exit to foul-smelling pus. Without a moment's delay a drainage tube was introduced, and large quantities of abominably fœtid pus were evacuated. The patient's weak state and alarming cyanosis forbade resection of a rib being attempted, although it was open to question whether the drainage tube would continue to act owing to the close approximation of the ribs. However, our fears were not realised, and drainage went on satisfactorily.

On the day after thoracentesis, 20 c.c.s of polyvalent anti-streptococcal serum were injected. On August 5, the pulse fell to 100 from a maximum of 126. The respirations remained fast—40 to 44 per minute. The temperature gradually fell, spiking in the evenings, and remained subnormal for three days from August 14. It then rose again for no apparent reason, spiking for a week, and at one time touching 102.2°. From August 27 to September 14, it was nearly always subnormal, only on September 3 rising to 99.2° in the evening. The sputum became less and less offensive, lessened in amount, and finally almost ceased.

This brief clinical sketch conveys no idea of the perilous and critical state of the patient up to the time that thoracentesis was performed and of the determined struggle for life which he made before and after that operation. He had been a life-long total abstainer, but he drank champagne freely and took teaspoonful doses of whisky in the form of turpentine punch for many days after August 1. All stimulants were stopped long before he left hospital. They were prescribed and taken as any other medicines, and they did the patient good.

A. B. left hospital for the country on September 14. He continued to progress favourably, save for a chill and a passing catarrh in the middle of October, and at the time of writing was apparently in good health.

Case III.—*Mediastinal Lympho-sarcoma involving the Œsophagus, Stomach, and Liver, and compressing the Trachea.*—At Whitsuntide in the present year (June 5th) Mr. X., a professional man, then in his seventy-first year, failed to recognise the identity of his own son when he saw him in the garden of his house. Two months previously he had experienced great difficulty in filling up the Census paper, owing to lapse of memory even as to the number of his children. In the light of subsequent events his family regarded this incident as the earliest sign of impaired health.

On Tuesday evening, June 13th, Mrs. X. wrote asking me to see her husband, who seemed to be losing his memory as well as his appetite. Her message ran as follows:—"I should be very glad if you could manage to call on Wednesday morning sometime between ten and eleven o'clock to see my husband. I am most uneasy about him. He is far from well, and I do not think he is fit for his various duties. If you could see him before he went out I know your advice would weigh with him." I visited him next morning. On examination both heart and lungs appeared to be sound. The liver was somewhat enlarged. His tongue was coated. The urine was examined next day—it was clear, acid in reaction, of moderate density, free from albumen. It was high-coloured owing to the presence of bile-pigment. There was no undue arterial tension.

The mental condition was unsatisfactory. Mr. X. seemed dazed, could not remember dates or names, but expressed himself as feeling quite well. As a tonic I ordered him half drachm doses thrice daily of Easton's syrup, and suggested lemon-flavoured sanatogen as a help in his dietary. Acting under my advice, Mr. X. sought and obtained leave of absence from his professional duties, and left town in the middle of July for a change. Early in August he was home again. On August 10th his daughter wrote asking me to call the following morning to see her father, "who seems poorly to-day. He complains of feeling cold, and was sick in his stomach, but could not be induced to remain at home. We took his temperature, but it was up only two points."

Next morning, on calling, I found Mr. X. at breakfast. After a moment or two, he rose from his chair and hurriedly left the room. On returning after a few minutes he apologised, and explained that he was obliged to rush out, and had lost his breakfast in a sudden attack of vomiting without nausea. After examining him I prescribed a simple mixture of solution of bismuth citrate, and tincture of nux vomica. This he took for some days, apparently with benefit.

On August 21st, Dr. Percy Kirkpatrick kindly saw Mr. X. in consultation with me, and we agreed that he was doing himself harm by going out in the evenings and sitting up late at night, as had been his habit. During the next fortnight the patient had several attacks of œsophageal spasm (œsophagismus) on attempting to swallow food.

On the evening of September 7th I received the following message from Mrs. X.:—"I shall be very glad if you will kindly come and see my husband to-morrow or next day. He *lost his voice some days ago*, and he has had a return of the sickness for which you prescribed some time since." I visited next morning, and found the patient voiceless, speaking only in a whisper. Believing that he had contracted a catarrhal laryngitis, I ordered an inhalation of 20 drops of a mixture of compound tincture of benzoin (4 parts), menthol (1 part), and creosote (1 part), floating on hot water 140° F.), to be used three times a day.

The following Thursday, September 14th, Mr. X. came to to see me in my consulting-room. His laryngeal symptoms persisted, and I advised him to drive straightway to Dr. R. H. Woods, President of the Royal College of Surgeons in

Ireland, who had advised him on a former occasion for some throat affection. This he did, and the same afternoon I had the following letter from Dr. Woods:—"34 Merrion Square, E., Dublin, 14th September, 1911.—Dear Sir John, I examined Mr. X., and find he has paralysis of the right recurrent laryngeal nerve and compression of the trachea fairly low down. The right side of his neck is fuller than normal, and the veins on the right side of the chest are dilated. He has, in my opinion, either an aneurysm or a new growth in the right upper region of the chest. I did not examine his chest directly, but from collateral evidence I should be more inclined to expect an aneurysm than a neoplasm.—Yours faithfully, R. H. Woods."

At a subsequent interview Dr. Woods told me that he had detected slight tracheal tugging.

On the morning after the receipt of this most valuable opinion I made a careful physical examination of the patient's chest and circulation. The supra-sternal notch was abolished. There was an area of visible pulsation just above the right clavicle, and in this situation also the heart's sounds were very audible. No very marked dulness on percussion was present in the right sub-clavicular region or in the upper sternal region. While the radial pulses, right and left, were synchronous, the right was markedly smaller in volume than the left. The arterial pressure tested by Potain's sphygmomanometer was 11 centimetres of mercury in the left radial, but only $10\frac{1}{2}$ centimetres in the right. I may mention that this difference lessened as the disease advanced and as the interference with the systolic wave came to involve the left subclavian artery as well as the right.

With the view of clearing up the differential diagnosis between an aneurysm of the aorta, or innominate artery, and a new growth, I had a radiograph taken in the X-ray room at the Meath Hospital on Saturday, September 16th. The position and extent of the shadow were perhaps in favour of a neoplasm rather than of an aneurysm.

At this time violent fits of coughing and distressing spasms interfered with the act of swallowing, and Mr. X. began to subsist on fluid food alone, and that taken in only small quantities at a time. For the relief of cough the official guaiac resin lozenges and morphine lozenges were prescribed, but the remedy which gave most relief was the

sipping of warm water to which a little glycerine and lemon-juice were added. A copious bleeding also occurred about this time—it was not easy to say whether it constituted a hæmatemesis or a hæmoptysis. Sometimes a blood-stained (grumous) sputum came up with the cough. On exertion great breathlessness ensued.

On Friday, September 29th, Dr. Finny very kindly saw Mr. X. in consultation with me. At this time a large swelling existed in the neck on the right side, and the trachea was seen to be bent over to the left by pressure from the mass. Dr. Finny pointed out to me that the tumour was too solid and resistant for an aneurysm; also that the area of pulsation lay below it, and that the pulsation was not excentric. Furthermore, there was now little or no difference in the rhythm or volume of the radial pulses. He expressed a definite opinion in favour of a neoplasm, and approved the treatment upon which I had put Mr. X. on September 23rd—namely, increasing doses of iodide of potassium and occasional inhalations of nitrite of amyl. I had prescribed these remedies at an early morning visit paid in answer to an urgent note from Mrs. X., dated Saturday, September 23. 7 34 a.m., to this effect: "Will you kindly come to see my husband this morning. He had a terrible attack of breathlessness last night, and we were greatly alarmed."

Dr. Finny's opinion carried conviction to my mind that we had to deal with a new growth rather than with an aneurysm. We agreed that inhalations of the "A. C. E." mixture (alcohol, 1 part; chloroform, 2 parts; and ether, 3 parts) might relieve the dyspnœa and spasms, which were daily increasing in violence, and these inhalations did give much relief during the terrible fortnight of suffering which followed. Dr. Finny again saw the patient during my absence from town on the next succeeding Sunday, October 1st, for it now became necessary to visit Mr. X. once or twice daily.

On Tuesday, October 3rd, Dr. Woods examined the larynx while the patient was in bed. He demonstrated to me most beautifully the complete paralysis of the right vocal cord. He considered that the growth was developing quickly, and gave a very unfavourable prognosis.

For the next fortnight oxygen inhalations did much to relieve the sufferer, and, indeed, to keep him alive. Day by

day it became more and more clear that the sands of life were fast running out.

When I visited Mr. X. on Thursday morning, October 12th, I was surprised to find him sitting up in bed and smoking a pipe. As I entered his room he whispered, "I have bucked up a bit." Afterwards I learned that earlier in the morning he had told the nurse in attendance that he had only two days more to live. On Friday and Saturday he was manifestly sinking. A dreadful night of struggle for breath followed. On Sunday morning I was sent for. His hands were now cold. To relieve the urgent dyspnœa I injected hypodermically one-sixth of a grain of morphine and one-thirtieth of a grain of strychnine sulphate. This gave ease, and the end came at half-past three o'clock in the afternoon without further suffering.

On Monday, October 16th, Dr. Boxwell, assisted by Mr. Robert Weldon, made a partial autopsy in my presence. Appended are Dr. Boxwell's notes:—

"Only a partial *post-mortem* examination was possible. The growth in the neck, presenting a tense elastic tumour, was first explored. In the process of dissecting the anterior triangle, the scalpel suddenly dipped into a large cavity underlying the distended cervical fascia, and from the opening made fluid resembling pus welled up. The cavity extended straight down into the mediastinum, and was caused by the liquefaction of the cervical and posterior mediastinal glands, which had been matted together, forming an ill-defined mass surrounding the innominate artery and its branches. The glands at the root of the lungs were similarly involved, and on making an opening in the diaphragm it was clear that the glands along the lesser curvature of the stomach were extensively enlarged, while several white masses protruded from the surface of the exposed liver. The left lobe of this organ was removed, and was found to be thickly studded with secondary deposits. While the heart and lungs escaped altogether, the œsophagus had been invaded—apparently from without—almost throughout its length, and where the masses of new growth had broken through the mucosa there were extensive bleeding and fungating ulcers. The spleen was very small, and entirely free from deposits.

"A remarkable point about this growth was that almost every deposit, however small, was partially liquefied, and it was difficult to find portions of it firm enough to cut.

"Microscopically the appearance suggested 'small round-celled carcinoma.' That is, the cells were those of a small round-celled sarcoma, whereas their method of growth along the lymphatics apparently in solid masses, recalled the distribution and alveolar stroma of a cancer. In the section from the liver the dense fibrous alveolar stroma was particularly evident. I am inclined to look upon it as a variety of lympho-sarcoma. It was certainly not a squamous cancer, and if the cells were epithelial, it was not easy to see whence they originated."

By an interesting coincidence two cases of sarcoma of the thymus were reported in the *Lancet* for November 4, 1911, conjointly by Mr. William Sheen, Surgeon to the Cardiff Infirmary, Mr. Cornelius A. Griffiths, Assistant Surgeon to that Infirmary, and Mr. H. A. Schölberg, Senior Pathologist to the same institution. Both cases occurred in young males, aged seven and eighteen years respectively. In both the onset was acute, and dyspnœa, at first in attacks, was very severe. The growths were of an identical nature in both cases. The morbid anatomy and microscopical appearances were those of a small, round-celled sarcoma. The pressure symptoms resembled those observed in my unfortunate patient.

But the case which most resembled that now reported was one which I brought before the Pathological Section of this Academy on Friday, March 25, 1898, under the heading "Cancer of the Œsophagus with Secondary Growths perforating the Trachea and the Right Subclavian Artery."[a] In that case the absence of any constitutional disturbance, and the presence of a whole group of pressure symptoms, led me to the belief that the lesion was most likely an aneurysm of the terminal portion of the arch of the aorta pressing backwards and to the left. The laryn-

[a] Transactions of the Royal Academy of Medicine in Ireland. Vol. XVI. 1898. P. 355, *et seq.* Dublin Journal of Medical Science. Vol. CV. Third Series. No. 317. May, 1898. P. 396.

geal stridor with paralysis of the left vocal cord pointed to pressure on the recurrent laryngeal nerve; the dysphagia, to pressure on the œsophagus; the bronchial catarrh and dyspnœa, to pressure on the left bronchus; the recurring fœtid breath and expectoration, to pressure on the nutrient vessels of the left lung. The physical signs of thoracic aneurysm were absent, but then let us recall to mind Sir William Broadbent's division of thoracic aneurysms into two classes according to the predominance of physical signs or of pressure symptoms respectively, the former term applying to aneurysms of the ascending aorta and first part of the arch, the latter to aneurysms of the transverse and descending portions of the arch.[a]

Writing in 1854, Dr. William Stokes observed that, an intra-thoracic tumour having been discovered, the diagnosis will be between aneurysm and cancer. He showed that a cancerous tumour may not only produce all the symptoms which we observe in aneurysm as proceeding from compression of surrounding organs, but that it may exhibit a diastolic pulsation, accompanied by a distinct bellows murmur. He stated, however, that as aneurysm is so much more frequent than cancer, the chances will be greatly that in any given case of intra-thoracic tumour the disease is aneurysmal.[b]

[a] Heart Disease and Aneurysm of the Aorta. By Sir William H. Broadbent, Bart., K.C.V.O., and John F. H. Broadbent, M.A., M.D. (Oxon.), F.R.C.P. Fourth Edition. London: Baillière, Tindall & Cox. 1906. Pages 434, 453 and 458.

[b] Diseases of the Heart and Aorta. Dublin: Hodges & Smith. 1854. Page 603.

APOLLINARIS WATER.

This well-known and very palatable table-water has received the Grand Prix at the Dresden International Hygiene Exhibition.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Diseases of the Nose and Throat. By St. Clair Thomson, M.D., F.R.C.P. (Lond.), F.R.C.S. (Eng.); Physician for Diseases of the Throat, and Professor of Laryngology in King's College Hospital. London: Cassell & Co. 1911. Large 8vo. Pp. xvi + 791.

The quotation from Osler which the author has placed at the commencement of his book is so apt that it may be repeated here:—"To study the phenomena of disease without books is to sail an uncharted sea, while to study books without patients is never to go to sea at all."

It must be confessed that the work under consideration adds a valuable contribution to our libraries. The method of arrangement is not much out of the common, but has many points to recommend it.

In the first portion of the book, the regional diseases are dealt with separately, and in this part is included a chapter dealing with Diseases of the Trachea and Œsophagus. This is a departure from what is usual in text-books on the nose and throat, though all specialists in diseases of the nose and throat include within their sphere the affections of the trachea and œsophagus.

The author then branches off and deals with various infective disorders, and the conditions found in the nose and throat in the course of general affections. He winds up with a description of some of the major operations belonging to these regions.

It is hardly necessary to pick out any particular chapter for praise, as it is easy to see that what is described is actually within the knowledge of the writer, and that the operations have been performed by him, and are not merely descriptions copied from other people.

Many good coloured illustrations are scattered throughout the work, and special mention must again be made of the chapters dealing with the affections of the trachea and œsophagus.

As an example of the author's advice, the following sentence, occurring in his general description of operative procedures, may be taken :—" Much judgment is required in adapting the suitable operation to each case. While in some instances one or more small interventions are all that is required, in another a well-planned and more extensive operation may be indicated. In any case, the advice of Semon should be kept in mind—namely, that the magnitude of an operation should not exceed the gravity of the symptoms calling for relief."

The author is to be congratulated on an excellent addition to the text-books on this specialty, and the work is highly to be commended. It will prove of practical value to all who interest themselves in Diseases of the Nose and Throat and the treatment of troubles in these regions.

Bone-setting and the Treatment of Painful Joints. By Frank Romer, M.R.C.S., L.R.C.P., and L. Eliot Creasy, M.R.C.S., L.R.C.P. London: James Nisbet & Co. 1911. Page 62.

The title of this little book might lead one to expect that it would contain a defence of bone-setting and bone-setters, using the term bone-setting as applicable only to the manipulative methods employed by unqualified practitioners of the bone-setter type. It is, however, on the contrary, designed to teach the qualified practitioner the use of manipulative methods, in order that by acquiring the requisite skill in the treatment of painful joint troubles following trauma, the cult of the bone-setter may be caused to disappear. We welcome the book if only that it admits that up to the present " bone-setters " have really been relieving cases that had been neglected or ignored by most medical practitioners. The skill of the bone-setter mostly consists in the breaking down of old adhesions. In this little book details are given as to how adhesions in connection with each of the joints may be

safely broken down. The information is carefully and succinctly presented, and should be mastered by every medical man. As soon as medical men show themselves as skilful in dealing with these cases as "bone-setters," bone-setting as a branch of unqualified practice will disappear, but as long as the public find that cases given up by orthodox practitioners are benefited by so-called quacks, so long will the quack flourish and deservedly so. It is not a medical degree that the public want, it is relief and cure. The present reviewer, an orthodox practitioner, would much prefer, if ill, to be cured by a quack than condoled with by all the eminent and much qualified medical men in the kingdom. If the profession wishes to destroy quackery in the form of bone-setting it will do it best, not by railing at bone-setters, but by showing that its own members can do better than the best of these professionally maligned but sought-after quacks. The present little book should help many along lines in which we expect few have received tuition in their student days.

Atlas of Microscopic Diagnosis in Gynecology. With Preface and Explanatory Text by DR. RUDOLF JOLLY, Priv. Doc., Chief Physician of the Gynecological Clinic University of Berlin. Only Authorised English Translation by P. W. SHEDD, M.D. New York. With 52 Lithographs in Colour and 2 Textual Figures. London and New York: Rebman, Ltd. 1911. Pp. ix + 192.

THIS Atlas consists of 52 very beautifully executed and coloured reproductions of microscopical preparations illustrative of various physiological and pathological gynæcological conditions. Amongst these are included sections of the normal mucous membrane and epithelium of the uterus, of endometritis in its different forms, of erosion of the cervix, of the different changes associated with menstruation, of some of the changes associated with pregnancy, and of the various malignant conditions met with in the uterus and the vagina.

There is also a considerable amount of descriptive letterpress appended to each illustration, as well as a succinct description of the utility and technique of microscopical

examination. The whole is based on the work done in the Gynæcological Clinic of the University of Berlin.

Professor Jolly's work has been translated by Dr. P. W. Shedd, of New York, and, if this gentleman had contented himself with the usually accepted methods of orthography and punctuation, his translation would be more intelligible. His choice of language, too, might with great advantage have been directed towards simplification instead of towards mystification. Such sentences as " deceptive views of this sort are invariably to be differentiated from true stratification by the fact that in the latter phenomenon all the cells in parallel include and present their nuclei to the microtomic incidence " are apt to paralyse temporarily the understanding of the reader.

Reports from the Laboratory of the Royal College of Physicians, Edinburgh. Edited by Sir John Batty Tuke, M.D., and James Ritchie, M.D. Vols. X. and XI. Edinburgh: Oliver & Boyd. 1911.

Volume X. of these Reports contains the papers published from the Laboratory up to April, 1907, and Volume XI., those published from 1907 up to the end of 1910. Volume X. contains twenty-seven contributions, of which about two-thirds are concerned with pathological subjects, the remainder being either anatomical or physiological; while Volume XI., which is much the larger of the two, contains forty-one papers, of which twenty-nine are pathological, seven anatomical, two physiological, and three pharmacological. It is obviously impossible to refer to the subject-matter of so large a number of papers, and inasmuch as they have all appeared elsewhere, it is unnecessary to do so. In reading through them, however, one cannot help being struck by the fact that many of them have become standard reference papers in connection with the subjects with which they deal. Collectively they constitute a work of which the laboratory may well be proud. Dr. Berry Hart is one of the largest single contributors. His articles on the Descent of the Testes and Ovaries are specially interesting, and are well illustrated. A series of papers on various aspects

of the physiology and pathology of the blood by Goodall, Gulland, and other writers are well known to all students of hæmatological literature, and are here conveniently collected together. Many clinical subjects, such as the Urinary Pancreatic Reaction, the Prophylaxis of Post-Operative Peritonitis, &c., are dealt with, in addition to the large number of more purely pathological papers. We may repeat what we have already said, that the record of work here presented is one which is extremely creditable to all concerned, and of which the Edinburgh School of Medicine may be deservedly proud.

What to Eat and Why. By G. CARROLL SMITH, M.D. Philadelphia and London: W. B. Saunders Company. 1911. Pp. 310.

THIS is an interesting and practical treatise on dietetics, the author wisely including a number of suggestions as to the medicines which best collaborate with foods. The chapter on constipation is suggestive and useful; many of the statements afford food for thought, whilst a few should not be thoughtlessly accepted.

The Sensibility of the Alimentary Canal. The Goulstonian Lectures delivered at the Royal College of Physicians, March, 1911. By ARTHUR F. HERTZ, M.A., M.D. Oxon.: F.R.C.P.: Assistant Physician, Guy's Hospital. London: Henry Frowde; Hodder & Stoughton. 1911. 8vo. Pp. 83.

IN his Goulstonian Lectures for 1911, of which the present book is a reprint, Dr. Hertz discusses the present position of our knowledge concerning the sensibility of the alimentary canal. The lectures are of unusual interest to all medical men, dealing as they do with a subject of supreme importance in connection with every-day medical work. Dr. Hertz has new information derived from his own experimental work, and successfully, we think, contends against many previously received views on the subject. Few individuals who have personally experienced severe *intra*-abdominal pain would agree with the views so ably propounded by Dr. James

Mackenzie, to the effect that all such pain is actually situated in the abdominal wall, and is of a referred nature. It is, therefore, somewhat of a relief to find that Hertz is able to bring forward evidence to prove that pain in diseases of the alimentary canal is most frequently true visceral pain, while tenderness on pressure, as most patients will admit, is most often due to hyperalgesia of the skin and the abdominal wall. Into the nature of this proof it is impossible to enter in a brief review; it is based on direct experimental work and is apparently satisfactory, but we will look forward with interest to criticism on the part of surgeons and others. Among other points discussed in the book is the relation that exists between hyperchlorhydria and the pain in gastric ulcer. In Guy's Hospital Reports for 1910 the same subject is dealt with and at greater length, the important conclusion being arrived at that the contact of acid juice with an ulcerated surface does not of itself lead to pain. Further investigations on this subject are, we think, desirable. The lectures as a whole are refreshingly original, and deserve careful consideration.

Leprosy and its Treatment. By Pandit Kripàràm Sarmà. Third Edition. Published by the Author, 8 Nandi Bagan Lane, Salkea, Howrah. 1911. Pp. vii + 232.

This elaborate advertisement of an unqualified practitioner, Kripàràm Sarmà, consists of 232 small octavo pages, and contains a portrait of the author himself and one of his father. And after the manner of American and European quacks, he gives portraits of his patients before and after treatment. Not only has he a big advertisement, but he has also a grievance; the medical profession in India refuse to acknowledge him as worthy of recognition and decline to allow his remedies to be used in their hospitals unless he puts the members of the medical profession in full possession of his formulæ, dosage and mode of administration. He avows that his object is to exterminate disease from India; but he is to do so by drugs prepared by himself alone and sold by him at fancy prices. This audacious gentleman has nostrums for eighteen varieties of leprosy; for rheumatism, gout,

lumbago, sciatica, scrofula, piles, asthma, colic, liver complaints, dyspepsia, acidity, diarrhœa, gastritis, and all kidney complaints.

The one consolation we had as we read the work written by this hereditary quack is the determined stand of our professional brethren in India against his impudent demand for recognition.

First-Aid Charts. By EDWARD C. B. IBOTSON, M.B., B.S. London. Bristol: John Wright & Sons, Ltd. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd.

WE have received a series of four charts, devised by Dr. Ibotson, with a view to presenting in a form that can readily be referred to the symptoms of the various incidents that are likely to require first-aid relief, and the appropriate treatment for the same. The charts are intended to be hung on the wall, and are printed in large type. The first deals with such accidents as the impaction of foreign bodies in the nose, ear, &c., scalds, burns, and with the common poisons. The second summarises the first-aid method of recognising and dealing with fractures and dislocations; the third deals with wounds and hæmorrhage; and the fourth with the different forms of insensibility. The charts will, we feel sure, be useful to those for whom they are intended.

The Essentials of Food. By DONALD STEWART, M.D. London: John Bale, Sons and Danielsson. 1911. Pp. 182.

THIS book belongs to the pemmican class, but is rather too joyous, lacking arrangement and condensation. The following two sentences are separated by but a few pages:—

"Milk is the most wonderful food the world possesses."

"Eggs . . . This is the most remarkable production in Nature."

Such a sentence as the following needs the services of a commentator:—

"Tabloids can be bought of 1 grain each of citrate of soda, and when several ounces of milk are ordered at a time, a

few drops of chloroform should be added to prevent any mould forming."

Another sentence revives memories of the conversation between the walrus and the carpenter—

"Inasmuch as isinglass is the purest form of jelly, and this substance is obtained from the swim bladder of fish (especially the sturgeon). This is the natural place to say a word or two on jelly and fish."

The author is so afraid of giving a baby too much proteid, that up to three months old he allows only one part of milk to two of water, yet when citrated he says "no dilution of the milk is necessary."

The author has attempted to squeeze in too much, and to write more discoursively than the size of his book will justify. Many of the tables introduced are hardly, if at all, explained. The result may fulfil the somewhat cryptic conclusion of the preface.

"It is thought the information in this book is a fairly complete guide to any one requiring an insight into the methods of a food treatise."

ANNUAL REPORTS OF AMERICAN HOSPITALS.

1. *Forty-seventh Annual Report of the Trustees of the Boston City Hospital, U.S.A.*, 1911. City of Boston Printing Department. 1911. 8vo. Pp. 190.

2. *Annual Report of the Cincinnati Hospital for the year ending December* 31, 1910. By JOHN FEHRENBATCH, Superintendent. Cincinnati: Roessler Bros. 1911. Pp. 72.

THE liberal municipal support to American hospitals makes us envious of them, for the Report of the Boston Hospital tells us that during 1910 the city authorities expended on the buildings £12,000 for fire-proofing; £5,000 on an engine-room building; £2,100 on electric machines; and close on £3,000 for new wiring. The Cincinnati Hospital also receives very liberal support from the Cincinnati municipal authorities, amounting to over £46,000.

But when we come to consider these reports from a medical standpoint they are very disappointing : tables of operations and lists of the nationality of patients ; ages and sexes of patients, and so forth, complete the volume. As contributions to medicine the volumes are of very little value indeed. We regret this, for there is evidence that the medical staffs of the hospitals have an abundance of good material from which instructive, suggestive material might be produced.

A Servant of the State. By ELISABETH COSBY. London : Cassell & Co. 1911. Cr. 8vo. Pp. vi. + 334.

A WELL-TOLD tale of the present time. To the publishers we are grateful for giving us the opportunity of reading the story of Veronica and Philip de la Cherois—a "Servant of the State." It is a good thing that members of the Medical Profession should relax a little on occasion and read a novel which is free from guile.

Quite early in her book (at page 16) the authoress pays the Medical Profession a compliment. She writes : "It is a well-known fact that, if a man is entirely eaten up by his profession, he is exasperatingly ignorant of all that lies outside it. . . . With the exception, perhaps, of the medical profession, which knows no limitations, but brings a man into touch with everything in the world, animal, vegetable and mineral—the calling which completely absorbs a man seems to put blinkers on him, so that he only sees straight ahead, and his sympathies get a little bit cramped in consequence."

Later on a tribute is paid to the sagacity of a physician in the person of Dr. Clyde, "one of the best known and most appreciated neuro-psychologists in Europe," whose cures effected in nervous cases were marvellous. "He was particularly successful with people, both men and women, who had given way to habits of intemperance—either by the blatantly vulgar means of alcohol, or the more insidious craftiness of morphia, with its ghastly refinement of injections, and abandoned depravity of opium eating. His method was

to hypnotise the patient, and then, whilst either in a lethargic or cataleptic state, to make such suggestions as should arouse them to a sense of their slavery, and determine them to overcome it." The grammar of this last sentence is open to adverse criticism, but we are concerned with Dr. Clyde. A faked prescription for soap pills falls into his hands, and so he greets his patient with the question: "How long have you been in the habit of taking opium?"

There is a curious slip at page 157. "The interval which occurs between a verbal question and answer is sometimes an interesting period. . . . It is at all times rather a fearful period, something like the interval between the thunder growl and the lightning flash." We have always believed that light travelled faster than sound, but the above sentence seems to call that belief into question.

There are some happy thoughts in this book. "I pity the man who can stand by himself in the midst of the pine forest and say, 'I feel lonely.' Solitude is not loneliness. Real loneliness is to be hemmed in by a crowd of unappreciative relatives." (Page 10.)

We have not ventured to give a synopsis of the story of "The Servant of the State." It should be read, and it will rivet the reader's attention from start to finish.

Ophthalmic Therapeutics. By Dr. A. Darier, of Paris. Translated by Sydney Stephenson, M.B., F.R.C.S. London: Rebman. 1911. 8vo. Pp. xiv + 444.

This volume of the "International System of Ophthalmic Practice," edited by Dr. Walter L. Pyle, of Philadelphia, is one which is quite invaluable to the up-to-date ophthalmologist.

It comes from the pen of one of the most distinguished therapeutists in the ophthalmological world, of whom it might be almost asserted that what he does not know about ophthalmic therapeutics is not worth knowing.

The first part of the book is devoted to general therapeutics, such as constitutional treatment, subcutaneous, intravenous, and subconjunctival injections, serum

therapy, baths, electricity, local medication, &c., &c. The second part deals with special therapeutics of the various portions of the eye and its adnexa, and offers a whole storehouse of remedies for selection.

The work is naturally strongly tinged by Dr. Darier's personal views on ophthalmic therapeutics, such as those on the value of subconjunctival injections, &c.; but full attention is paid to all other therapeutic measures which have received any substantial support in the ophthalmological world of late years, and the book will be eagerly consulted by many an oculist in search of a remedy for cases which do not respond to his customary therapeutics.

Dr. Darier is well known to be an enthusiastic therapeutist—perhaps we may say a therapeutical enthusiast—and the general impression received from a perusal of this most interesting work is that of the many remedies described by Dr. Darier there is not a single one which the writer would not himself adopt in confident hopes of a joyful issue. The translation does ample justice to the lucidity and conciseness of the original, and the book is provided with an excellent index.

The Liverpool Medico-Chirurgical Journal. Edited by JOHN HAY, M.D. Vol. XXXI. 1911. Liverpool Medical Institution, Hope Street. Pp. 499. Published half-yearly. 5s. per annum.

THIS journal is chiefly filled by papers read at the meetings of the Liverpool Medical Institution. The first section is that of Eugenics, and there are several papers on this subject:—"The Aim and Scope of Eugenics," by Sir James Barr; "The Child as an Asset of the Empire," by A. M. Paterson; "The Eugenic Aspect of the Feeble-minded Child," by Dr. Damer Harrison; &c. Following there is a paper by Dr. E. W. Hope, Medical Officer of Health for Liverpool, on "Local Administrative Control of Tuberculosis." There is a paper of special interest on "Two Cases of Internal Malignant Disease accompanied

by Multiple Metastases of the Skin," together with a criticism of the adrenal origin of renal hypernephromata. In the surgical sections are papers on Volvulus and Unilateral Nephrolithotomy.

About thirty pages are devoted to short reviews of recent books. There are several good illustrations, on special pages of smooth, glazed paper, throughout the volume. These greatly enhance the interest of the papers they accompany. The whole volume is well got up, and is provided with a useful index.

RECENT WORKS ON THERAPEUTICS.

1. Riedel. *Berichte u. Mentor.*

2. *Opium.*

3. (*a*) *Inanition and Fattening Cures.*
(*b*) *Obesity and Gout.*
By Dr. Carl v. Noorden, Vienna. Translated and Edited by Dr. A. C. Crofton, Chicago. London: Rebman. 1910.

4. *Chemistry of Food and Nutrition.* By Dr. Henry C. Sherman. New York: Macmillan & Co. 1911.

5. *Symptomatic and Regional Therapeutics.* By Dr. G. H. Hoxie. New York and London: Appleton. 1910.

6. *Principles of Therapeutics.* By A. Manquat. Translated by Dr. M. S. Gabriel. New York and London: Appleton. 1910.

1. The Riedel Company supply a retrospect of recent scientific communications and analyses relating to therapeutics, and a general pharmaco-therapeutical survey of the more important works which have appeared during the year 1910.

The pamphlet follows somewhat the same lines as Merck's well-known Abstracts.

2. *Opium.*—A new claimant to our attention is offered under the name of *Pantopon* (*Omnopon*), which professes to represent the total action of opium. It is readily soluble and is suitable for subcutaneous injection. It is introduced and advocated by Professor Sahli, of Berne, and a number of other authorities, and appears to be worthy of trial.

The following is given as the composition of the new preparation, which is made by Messrs. Hoffman-la Roche :—

Morphine - - - -	52
Codeine - - - -	2
Narcotine - - - -	20
Papaverine - - - -	2.5
Thebaine - - - -	1
Narceine - - - -	1.2
Other alkaloids - - - -	4
	82.7
Water of crystallisation - -	8
Hydrochloric acid - - -	9
	99.7

3. No physician of the present day has contributed more largely or more sanely to the pathology and chemistry of therapeutics in relation to metabolism and nutrition than Dr. Carl v. Noorden, of Vienna.

From time to time he has brought out a valuable series of short monographs on therapeutics which are well worthy the attention of practitioners. Dr. v. Noorden takes no small delight in running tilt against dietetic fads and fallacies, but he is no mere iconoclast, and is ever ready to erect something of value in the room of the fallen idol. The monographs before us are based upon four lectures delivered in a post-graduate course for Vienna physicians (May, 1908).

It is needless to enter into details of each monograph, and it will suffice to briefly indicate their contents, and commend them to the serious attention of our readers.

How true is the following expression of opinion in regard to gout. Beyond the fact that in gout the fate and disposition of uric acid differs from the normal, "we know very little that is positive in regard to the significance of uric acid on the production of gouty processes. We do not even know whether the formation and destruction of uric acid deviates quantitatively from the normal. . . . Unfortunately, numerous vague symptoms of varying character, as fleeting pains in the extremities, in the body, the head, attacks of migraine, gastro-intestinal disturbances, are often christened with the name 'gout' simply because no other diagnosis can be made. As a rule, this diagnosis is merely the result of ignorance, and it can rarely tolerate the light of scientific criticism."

It is very remarkable how rare is genuine gout in Austria-Hungary. During two-and-a-half years' practice in Vienna is it not curious that v. Noorden, with his world-wide reputation, has seen only 25 cases of true *arthritis urica*, and of the 25 cases 20 were foreigners?

Much vapid nonsense is talked about gout. Any honest inquirer must, at present, be content to say that we know essentially nothing of gouty disease, and the manner in which the fate of uric acid is determined thereby.

The dietetic instructions for the management of gout are succinctly formulated by v. Noorden, and are placed on a rational and scientific foundation.

4. A well-planned, useful, and well-executed work, written with judicial care, and thoroughly up-to-date. It successfully welds together modern physiology with practical dietetics and therapeutics, and can be heartily commended as a sane and sound exposition of the chemistry of food and nutrition.

One of the most important and much-discussed points in the physiology of digestion is the origin of the body fat. It seems now to be fairly well established that body fat arises from three sources :—

(*a*) Directly from food fats.

(*b*) From protein food, either directly or indirectly through the production of carbohydrate from protein.

(*c*) From carbohydrate.

In the latter case the experimental evidence follows four distinct lines, viz. :—

(i.) Determination of the amounts of body fat formed.

(ii.) Determination of the milk fat produced.

(iii.) Observation of the amount of carbon stored.

(iv.) Observations upon the respiratory quotient.

5. This book purports to represent the course in General Therapeutics recommended by the Committee on Curriculum of the American Medical Association and by the Association of American Medical Colleges. It is divided into General Therapeutics and Regional Therapeutics, and the concluding part is an abbreviated Materia Medica.

The general impression made upon us by the book is not a favourable one, and it is not easy to see what useful purpose is served by the curious medley of which it is composed.

There is little good in it that is new, and some of it is not true—*i.e.*, accurate. For example, in the section on Bacterial Inflammations of the Skin (page 95) we are told :—"The reaching and removing the cause of these inflammations is the point at which we usually fail, because the parasite, *be it insect or coccus*, usually lies underneath the stratum corneum of the skin. We must, therefore, either penetrate or macerate this layer before we can destroy the parasite. Furthermore, most of the skin parasites are propagated by eggs." (The italics are ours.)

It would be difficult to write greater twaddle in so few words. The illustrations are poorly executed, and mostly meaningless.

6. The author aims high, and dedicates his work to young physicians in the hope that they will work for a renaissance in therapeutics, which will be the great achievement of twentieth-century Medicine. This is all very fine, but we are a long way yet from such a consummation, and we

doubt if M. Manquat's book will contribute much of value to this end. As is usual in French treatises, it is written in an easy-flowing style, but it is diffuse and speculative, and contains, in our opinion, little that has not been as well, or better, expressed or taught by other writers. The author travels over a wide field in a cursory manner. Thus, we have chapters on The Forms of Therapeutic Action, The Action of Medicines, Doses, Medicinal Opportunity, *Primum non nocere*, The Elements of Therapeutic Individualisation, Method in Therapeutics, and so on.

The book, in its original dress, may possibly appeal to French readers, but does not appear to us to be suited for English readers.

Our Baby: for Mothers and Nurses. By Mrs. J. Langton Hewer, Certified Midwife; late Hospital Ward Sister. Thirteenth Edition. Illustrated (83rd Thousand). Bristol: John Wright & Sons, Ltd. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. 1911. Pp. 176.

As we have favourably noticed this excellent "Mothers' Guide" so recently as May, 1910 (Vol. CXXIX., No. 461, Third Series, page 359), it is only necessary to state that it pursues the even tenor of its way, having now reached its thirteenth edition and eighty-third thousand copies.

The chief alterations in the present edition will be found in the chapters dealing with Feeding and Teething. They represent in an adequate manner the revision which the almost daily progress in scientific knowledge has demanded.

Copies of this useful book, suitable for presentation, are supplied bound in limp leather, with mounted corners and burnished edges, at half-a-crown net, or two shillings and ninepence, post free.

PART III.

MEDICAL MISCELLANY.

Reports, Transactions, and Scientific Intelligence.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

President—Sir Charles Ball, M.D., F.R.C.S.I.
General Secretary—J. A. Scott, M.D., F.R.C.S.I.

SECTION OF PATHOLOGY.

President—Professor A. H. White.
Sectional Secretary—W. Boxwell, M.B., F.R.C.P.I.

Friday, October 27, 1911.

In the absence of the President, Dr. T. Gillman Moorhead took the Chair.

Carcinoma of the Mamma with Secondary Deposits.

Dr. T. T. O'Farrell and Dr. P. K. Ryan.—The case came into hospital on the 13th of September, 1911, and was operated on after admission. In order to prevent ulceration the breast was removed. Skin-grafting was about to be done, but it was left over. In four or five days afterwards, however, the patient got worse, and died on the 13th of October. With the exception of a slight dulness at the base, the right lung was resonant up to within two days of death, although the *post-mortem* showed that the right lung was completely collapsed and the right pleural cavity was filled with an amber-coloured fluid. A *post-mortem* was done, and some secondary growths were obtained, which were not exhibited. The heart showed nothing of interest.

Dr. Moorhead said that the course along which the carcinoma passed was one of considerable interest. He would like to ask if there were any pressure on the veins in the thorax.

Dr. P. K. Ryan replied that he did not dissect them all, but there was some pressure on those he had dissected.

Malignant Mediastinal Growth.

Dr. Boxwell said that the organs shown were removed from a male patient of some seventy years of age. The illness of which he died was of comparatively short duration, and for some time there was a doubt as to the diagnosis. In the earlier stages it lay between thoracic or innominate aneurysm and mediastinal tumour. There had been dyspnœa, dysphagia, and some aphonia. There was at first a slight fulness at the root of the neck, just above the right clavicle, and a patch of dulness to the right of the manubrium sterni. The report of the throat specialist was—"Paralysis of the right vocal cord, due to pressure of the right recurrent nerve, most likely caused by tumour, possibly by an aneurysm." The report of the X-rayist definitely favoured aneurysm. Towards the close of the case it became obvious that the symptoms were due to a rapidly-developing new growth. The swelling advanced up the side of the neck, almost reaching the angle of the jaw. Hæmatemesis and melæna supervened, and the patient died of a combination of toxæmia and suffocation.

Only a partial *post-mortem* examination was possible. The growth in the neck, presenting a tense elastic tumour, was first explored. In the process of dissecting the anterior triangle, the scalpel suddenly dipped into a large cavity underlying the distended cervical fascia, and from the opening made fluid resembling pus welled up. The cavity extended straight down into the mediastinum, and was caused by the liquefa tion of the cervical and posterior mediastinal glands, which had been matted together, forming an ill-defined mass surrounding the innominate artery and its branches. The glands at the root of the lungs were similarly involved, and on making an opening in the diaphragm it was clear that the glands along the lesser curvature of the stomach were extensively engaged, while several white masses protruded from the surface of the exposed liver. The

left lobe of this organ was removed, and was found to be thickly studded with secondary deposits. While the heart and lungs escaped altogether, the œsophagus had been invaded—apparently from without—almost throughout its length, and where the masses of new growth had broken through the mucosa there were extensive bleeding and fungating ulcers. The spleen was very small, and entirely free from deposits.

A remarkable point about this growth was that almost every deposit, however small, was partially liquefied, and it was difficult to find portions of it firm enough to cut.

Microscopically the appearance suggested "small round-celled carcinoma." That is, the cells were those of a small round-celled sarcoma, whereas their method of growth along the lymphatics, apparently in solid masses, recalled the distribution and alveolar stroma of a cancer. In the section from the liver the dense fibrous alveolar stroma was particularly evident. Dr. Boxwell was inclined to look upon it as a variety of lympho-sarcoma. It was certainly not a squamous cancer, and if the cells were epithelial, it was not easy to see whence they originated.

Mitral Stenosis.

Dr. Boxwell showed a second exhibit which consisted of the heart and lungs of a patient who had died the usual lingering death from failing heart, with dropsy and hæmoptysis. Clinically there had been a prolonged systolic murmur, no thrill, and a curiously regular pulse. That is, beyond the persistent hæmoptysis and a history of frequent attacks of nasal epistaxis, the usual signs of mitral stenosis were not present. The mitral valve was, nevertheless, markedly stenosed. There was widespread chronic adhesive pericarditis. In the lungs were numerous infarctions, presenting various appearances according to their age. Some a pale yellowish grey, alternating with others of more recent date, and of a deep plum colour. The patient had never complained of pain or other symptom of pulmonary apoplexy beyond hæmoptysis. It had been suggested that these infarctions were more often simply hæmorrhages without antecedent embolism.

From a somewhat parallel case Dr. Boxwell showed part

of a lung with extensive infarction of almost the entire right lower lobe. Here the white plug in a large branch of the pulmonary artery was plainly seen.

Perihepatitis and Chronic Interstitial Hepatitis.

Dr. Boxwell presented a third exhibit which consisted of the liver, stomach, and duodenum from a female patient who had died of hæmorrhage from the stomach after a prolonged illness, of which jaundice and ascites were the most prominent features. About three years ago this patient had a severe attack of purpura hæmorrhagica, from which she apparently recovered. It was possible that this diathesis may have in part accounted for the uncontrollable bleeding which came on towards the close of her illness. She was admitted to the Meath Hospital, under Sir John Moore's care, in January of this year, deeply jaundiced, and with a considerable amount of fluid in the peritoneal cavity. The urine was deeply coloured. The stools were pale. There was no fever. These points made against the usual clinical conception of biliary cirrhosis. The prolonged jaundice was against the diagnosis of atrophic cirrhosis. Dr. Boxwell had expected to find either some definite peritoneal infection with enlarged glands, or, though she was a comparatively young woman (thirty-seven years), carcinoma of the head of the pancreas. She left hospital at the end of the Summer Session not much relieved, and returned last October worse than ever. On October 6th Sir John Moore had removed by paracentesis 580 ounces of ascitic fluid. Within a week hæmatemesis and melæna developed, and the patient practically bled to death. At the *post-mortem* the condition exhibited was found.

There was very remarkable thickening of the capsules of the liver and spleen. The free surfaces were deeply pitted and indented. These pits could be distinctly felt through the abdominal wall, after removal of the fluid, and the sensation conveyed strongly suggested the irregularities of the typical "hob-nail" liver. A glance at the specimen was enough to show that it was nothing of the kind. The irregularities were merely local depressions in the enormously thickened capsule, and did not extend into the underlying liver substance, the surface of which was comparatively smooth.

The liver, however, showed microscopically a cirrhosis of an extreme degree. The new fibrous tissue cut through individual lobules in all directions, and contained multitudes of the so-called new-formed bile-ducts. A dissection of the larger biliary passages and the portal vein failed to disclose any gross obstruction. After a section of the upper free surface of the liver both air and blood could be freely expressed through the portal vein, and a probe passed freely through the common bile-ducts and appeared in the duodenum.

The stomach and duodenum were deeply congested, and contained a little blood-stained mucus. There was no gross lesion. The true pathology of this case was somewhat puzzling. What was the cause of the extraordinary thickening of the hepatic and splenic capsules? Did this chronic inflammation antedate the cirrhosis, and mechanically prevent the alleged normal enlargement of these organs? The liver, though heavy and very dense, was not particularly big, and the spleen was not enlarged at all. The whole question of hepatic cirrhosis was chaotic, and such cases as the above were a standing problem yet to be explained.

Dr. T. G. Moorhead said that it was believed by some that these cases of capsular cirrhosis were tubercular in origin. In a parallel case under his own care he had tried by every means to find evidence of tuberculosis, and had failed. As to the terms "hypertrophic" and "atrophic," as commonly applied to cirrhosis, he considered them misleading. He looked upon these conditions as different stages of the disease, rather than different diseases.

Professor A. E. Mettam said he had made a casual inspection of the specimens from the first of Dr. Boxwell's exhibits under the microscope, and was of the opinion that the tumour was a lympho-sarcoma; he did not think there were any signs of epithelial cells, and that, indeed, it would be difficult to explain their presence if they were there. He thought that the laryngeal paralysis was caused by the tumour pressing on the laryngeal nerve. With regard to the cirrhotic condition, it was rather interesting to hear of "capsular cirrhosis," as it was met with in the lower animals due to animal parasites. He did not see any difficulty in explain-

ing why the jaundice supervened, as it would follow from the obstruction of the bile-ducts.

Dr. J. A. Matson asked Dr. Boxwell whether he thought syphilis had any particular relation to capsular cirrhosis. He had had recently a very similar case, for whom paracentesis had been repeatedly performed. In that case there was a clear history of syphilis. Personally he was of opinion that these cases not infrequently had a syphilitic origin.

Dr. Boxwell, in reply to the comments, said he was never quite satisfied as to the clear distinction between the two forms of cirrhosis. The possibility of syphilis as a cause in this case had not occurred to him. As generally described, syphilis of the liver appeared either as cicatrisation so marked as to cause lobulation of the liver, or else as a gummatous formation. He saw, however, no *à priori* reason why syphilis should not produce a liver similar to the one shown.

Two Scrapings of the Mucous Membrane of the Large and Small Intestines of an Ox—Johne's Disease—showing Acid Fast Bacilli.

Professor Mettam said he thought these would be of interest, as up to 1895 this acid fast bacillus was described as tubercle. The clinical history is one of profuse diarrhœa, and, at *post-mortem*, section of the gut showed that the mucous and sub-mucous membranes are greatly thickened. An enormous number of bacilli may be found in scrapings, and they differ from the tubercle bacillus in not being granular. Twort is the only one who has succeeded in growing the organism, and he has done so on a medium similar to that used for the leprosy bacillus. No experimental work, however, has succeeded in infecting animals, save by feeding upon the deceased mucous membrane from the bowel.

SECTION OF SURGERY.

President—R. H. Woods, F.R.C.S.I.
Sectional Secretary—C. Arthur Ball, F.R.C.S.I.

Friday, November 3, 1911.

The President in the Chair.

Fatal Case following Injection of "606."

Mr. H. Moore read notes of a case of early General Paralysis of the Insane, treated by "606," with a fatal result. The patient, aged twenty-five, was given .5 gram. intravenously. A severe reaction followed, his temperature rising to 103°. It was normal the following morning, and he left the hospital on the fifth day. Wassermann's reaction, which was negative before injection, was positive four days after. Six weeks later, his general condition being much improved, but Wassermann's reaction being still positive, he was again given .5 gram. On this occasion the reaction was very severe, his temperature rising to 105°, with much diarrhœa, vomiting, and general pain. The reflexes, which were all exaggerated before injection, disappeared. He was much better the following morning, but that afternoon he had a second rigor, with rise of temperature to 102°. His general condition became rapidly worse—he got ptosis of the left eyelid, bilateral paresis of the limbs, and difficulty of articulation, and died that night.

The President said that the administration of salvarsan had become firmly established, and it is now almost a routine practice. He was of opinion, notwithstanding Mr. Moore's case, that the administration is a safe proceeding, always presuming it is administered with proper technical precautions. It is one of the anomalies of medical education, he thought, that whereas in the case of vaccination the General Medical Council exacts an extraordinary length of time for its study, in the case of intravenous and other injections they did not exact any education at all. When giving the drug himself he often gave it in an ambulatory way, instructing the patients as to the after-effects. However, until more is known about it, it is doubtful whether it ought to be given outside hospital. He thought it was better

for a patient to get it in an ambulatory way than not to get it at all. The case brought forward by Mr. Moore appeared to have come within the zone of really dangerous cases. So far as one can judge it is in paralytic cases that the drug is dangerous.

Dr. Andrew Charles said he did not know the method adopted by Mr. Moore in the case under discussion; but if the intramuscular method was used possibly the absorption of the first dose may not have the same effect on the patient as the cumulative effect after the second injection.

Dr. Moorhead said he could hardly agree that the administration of salvarsan in an ambulatory manner was safe, the last injection given by him being followed by severe symptoms. The dose given was .5 gram. in the ordinary way, but the temperature rose to 105.4°, and the symptoms were almost identical with those experienced in Mr. Moore's case. The patient was extremly cyanosed; the tongue swollen, and he was complaining of tingling in his legs; but he was perfectly well next morning. However, had he been an outdoor patient he almost certainly would have died.

Sir John Lentaigne said he agreed with what Dr. Moorhead had stated. He thought the administration of this drug should not be undertaken unless the patient was under control in hospital for at least three days. In the first four cases in which he had administered it the symptoms were most alarming. One of them was a case of pseudo-locomotor ataxia, and it was by no means the worst of them. His opinion was that if the patient was thoroughly cleared out before injection it would be better. He had tried this and found a very great difference in the violence of the reaction, and the patients were free from constitutional disturbances afterwards. Taken all round, the treatment was of the utmost value, but it was a very serious business. He would on no account treat a patient and allow him to walk home afterwards. He would say that Mr. Moore's example was one to be followed.

Mr. Meldon thought there was one point that had not been touched on at all. What was the exact cause of the patient's death? If death had been directly due to the salvarsan it is probable the patient would have died within the first few hours, but apparently he got over the early reaction and succumbed to a second or later reaction.

Mr. W. I. de C. Wheeler said previously he thought he was the only one who got bad results, and with regard to Mr. Moore's case he thought it was by no means the only Dublin patient who died after salvarsan. Referring to the point about the treatment of paralytic cases, he understood that so harmful was it found to be to those patients admitted to lunatic asylums that it had been abandoned altogether. He had now given up the intramuscular injection in favour of the intravenous method, and he found it a good plan to plunge the arm into hot water first, to assist in getting at the vein. He had not found any bad results with the intravenous, but he had with the intramuscular method.

Mr. Gunn said he had a very small experience of this drug, but one of his cases had caused him much anxiety. The patient was a youngish man with very bad syphilis, with whom the ordinary treatment had failed. After injection he was fairly bad for some hours, but in about twenty hours afterwards he was found to be in a very serious state, and although he recovered he was very near death. He thought that the administration of the drug is attended with very considerable danger, and that every one who used it could, he was sure, recount some case which had caused anxiety. He would not give it to any patient in a light way.

Mr. Blayney asked was Mr. Moore justified in giving salvarsan in the case brought before them? Bearing Ehrlich's warning in mind, he would have hesitated to administer the drug to such a patient. He would like to know if a *post-mortem* examination had been made, as it would be interesting to have the pathological cause of death.

Mr. Pearson said in his experience of ten cases it was rather the rule to get no reaction. All patients were prepared as if they were to go through a surgical operation. In some of them the injection was followed by diarrhœa, but in no case was there a great rise in temperature. In two nervous cases in which he had used the drug both patients had greatly improved. One of them had a slight reaction, but the other had no reaction, nor did either show any signs of vomiting.

The President spoke of his experience of over forty cases where this drug was administered, and in all except the first he had given it intravenously; the first case was done subcutaneously. They were all done by gravitation, using a

boiled cotton wool filter. Whether this had anything to do with their immunity he could not say, but in none of the cases was there anything like a severe reaction. He, however, always took the precaution of having the patient thoroughly cleared out before injecting him.

Mr. Moore, replying to the comments, said Ehrlich was strongly opposed to allowing the patient out after injection. It was found that in two or three cases where the patient had a very slight reaction at first, in about thirty-six hours afterwards there was a severe reaction. He knew of a case where a man, apparently about seventy, had only a very slight reaction at first, but in about fifteen hours afterwards he had a serious attack of heart failure. It is recorded that alcoholic patients are ones to be very careful with. It was his practice always to prepare the patient as if he was about to undergo a major operation. The preparation of the drug is also of importance. It should always be made fresh, and the saline solution should be made at the same time with boiling water, and then allowed to cool. He would not give any patient an intravenous injection, and then allow him to walk away. In one fatal case which had been reported the patient was allowed to go away, and he got a severe reaction the same night, and died two days afterwards. He, however, found in a large number of cases there was was no reaction at all. With regard to the question as to the cause of death in the case which he had brought before the Academy he could not say what really was the cause. However, in earlier cases, where it was administered to infants, Ehrlich's idea was that they died of arsenic poisoning. He did not remember any case on record where the patient got blind; patients have complained of visual trouble after injection, but in most of them the trouble was present before. He knew of a patient who had been under treatment for syphilis for some years, and who had evidently had an attack of cerebral thrombosis, but was not improved by the use of any of the various remedies. At the patient's own request, a doctor gave him three intramuscular injections of .5 gram. each, at intervals of four weeks. This, he thought, was a very dangerous procedure, although the patient is still alive and well. Referring to the fatal case, he said he thought he would, under similar circumstances,

adopt the same procedure again; but he would, perhaps, give a smaller dose in the second injection.

Spinal Anæsthesia in Prostatectomy.

Mr. R. A. Stoney read a paper on the above subject. He said that one of the most important questions arising in connection with prostatectomy was that of a suitable anæsthetic. Owing to the age, condition of the heart, lungs, vessels, and kidneys, these patients were often unsuitable subjects for an anæsthetic, even though much might be done to mitigate its evils by careful previous preparation of the patient and the reduction of the duration of the anæsthesia by rapidity of operating. Another point of great importance, to which sufficient attention was not usually paid, was that of hæmorrhage. These difficulties, he considered, were best met by the use of spinal anæsthesia, as exemplified by the following case, where a 5 per cent. solution of novocaïn, with a small percentage of adrenalin, was used. The patient, a man of seventy-five, had extensive chronic bronchitis and a weak, irregular pulse, pointing to fatty degeneration of the heart, and atheroma of the vessels. The prostate was removed without trouble to the operator or pain to the patient under spinal anæsthesia. There were no unpleasant after-effects. The hæmorrhage, both at the operation and afterwards, was remarkably slight, all tingeing of the urine with blood having ceased after thirty-six hours. The patient was propped up in bed immediately after the operation, and was sitting in a chair on the third day. He left hospital with the suprapubic wound closed, and passing his urine in a normal manner, one month after operation.

Sir Charles Ball said some years ago, when novocaïn first came into use, he saw a considerable number of cases of spinal anæsthesia in Paris. He then brought home all the materials, but never used them. It is, however, conceivable that in certain cases it might be a desirable method. In most cases that he saw while in Paris the anæsthesia was not complete, and in many chloroform had to be administered before the operation was finished. He had also heard of several serious complications arising after operation with spinal anæsthesia, notably paraplegia. He was of opinion

that the risk of ether, properly administered, even to old people, is very largely exaggerated, and, exercising proper care, he would not hesitate to give ether to very old and decrepit patients. On the whole, he would say that ether was safer than spinal anæsthesia of novocaïn, cocaïn, or other spinal substitutes.

Mr. Gunn said he had tried spinal anæsthesia in five cases of prostatectomy, and while in theory it may be an admirable proceeding, he could not say it worked successfully with him. In one of his cases the patient nearly died through the anæsthesia going too far. The drug used was stovaïn, and whether it went too high or not the patient had the greatest difficulty in breathing. One point that Mr. Stoney had emphasised in his paper was that spinal anæsthesia lessened the hæmorrhage following the operation. He was of opinion that the bladder regained its tone more quickly after light ether anæsthesia, and that this was a most important factor in the control of *post-operative* hæmorrhage. He was inclined to think that the general anæsthetic got too much blame, as in the great majority of cases of prostatectomy there is sepsis, and this, in many instances, accounted for the chest complications. He was informed by those who used spinal anæsthesia in a large number of cases that chest complications were more numerous after it than after general anæsthesia.

Mr. Pearson said he understood Mr. Stoney to say that spinal anæsthesia had no effect on the heart and lungs, but in his (Mr. Pearson's) opinion it had a very marked effect on the blood pressure. He had known the blood pressure to have been taken during the administration of spinal anæsthesia, and the effect was found to be very serious indeed. He thought that the giving of ether, even to very old patients, was not a very serious risk, as Young, of Baltimore, had operated on 128 consecutive cases with ether anæsthesia without a single death. Nor did he agree with Mr. Stoney that adrenalin minimised the tendency to hæmorrhage. He spoke at some length on the use of omnopon as an anæsthetic, and said that it had been found satisfactory in almost all classes of cases.

Mr. Stoney replied to the comments. He said that as far as he could judge stovaïn did not appear to be as satisfactory as novocaïn. The latter is apparently the least toxic

of all the drugs, especially when combined with adrenalin, and he thought that in this combination it had not the effect of reducing the blood pressure. He believed that the technique was probably the cause of a great many of the failures. The patient is either allowed to sit up too long or is put in a too upright position, and, in consequence, no anæsthesia of the nerves of the abdomen is produced. In his first case this happened. However, when the patient is put in a position with lumbar region lower than the sacral region, so as to prevent the anæsthetic from going up too high, perfect anæsthesia is produced as high as the umbilicus. Regarding Mr. Gunn's remarks, adrenalin, he thought, had the effect of reducing hæmorrhage, and, seeing that the recovery is fairly rapid, the effect of adrenalin in contracting the small vessels more than counteracted the loss of tone in the bladder during the first hour after operation. With regard to the question of suitability, in this particular case he said he was forced to use a spinal anæsthetic as he could not improve the bronchitis or the condition of the patient's heart, even though he had exhausted every means in his power. He was still under the impression that if a general anæsthetic had been administered the result would have been fatal.

THE INTERNATIONAL HYGIENE EXHIBITION, DRESDEN, 1911.

THE worth of a Grand Prix depends chiefly upon the character of the Exhibition which confers it. In the case of the International Hygiene Exhibition, held at Dresden this year, the honour is a perfectly genuine one, and represents a consensus of scientific opinion. It is interesting to note, therefore, that a Grand Prix has been awarded in the pharmaceutical section at this Exhibition to Messrs. A. Wulfing & Company, for their preparations Sanatogen, Formamint and Albulactin, all of which have won high credentials from the medical profession.

SANITARY AND METEOROLOGICAL NOTES.

Vital Statistics

For four weeks ending Saturday, November 4, 1911.

IRELAND.

The average annual death-rate represented by the deaths—exclusive of deaths of persons admitted into public institutions from without the respective districts—registered in the week ended November 4, 1911, in the Dublin Registration Area and the twenty-one principal provincial Urban Districts of Ireland was 17.1 per 1,000 of their aggregate population, which for the purposes of these returns is estimated at 1,149,495. The deaths registered in each of the four weeks ended Saturday, November 4, and during the whole of that period in the several districts, alphabetically arranged, correspond to the following annual rates per 1,000. In some cases, owing to deaths not having been registered within the week in which they occurred, the rates do not fairly represent the weekly mortality :—

Towns, &c.	Week ending				Average Rate for 4 weeks	Towns, &c.	Week ending				Average Rate for 4 weeks
	Oct. 14	Oct. 21	Oct. 28	Nov. 4			Oct. 14	Oct. 21	Oct. 28	Nov. 4	
22 Town Districts	19.3	18.6	17.1	17.1	18.0	Lisburn	17.1	4.3	21.4	17.1	15.0
Armagh	13.7	13.7	20.6	13.7	15.4	Londonderry	15.3	8.9	8.9	19.2	13.1
Ballymena	22.9	9.2	18.3	22.9	18.3	Lurgan	30 1	—	12.9	4.3	11.8
Belfast	15.9	17.0	16.7	15.1	16.2	Newry	17.4	8.7	13.1	—	9.8
Clonmel	30.4	5.1	25.4	5.1	16.5	Newtownards	17.2	11.4	34.3	11.4	18.6
Cork	25.2	26.5	22.5	22.5	24.2	Portadown	8.9	22.2	8.9	8.9	12.2
Drogheda	16.8	16.8	4.2	8.4	11.6	Queenstown	13.2	13.2	6.6	—	8.3
Dublin (Reg. Area)	21.7	20.0	18.0	20.4	20.0	Sligo	23.4	28.0	—	4.7	14.0
Dundalk	7.9	23.8	23.8	15.9	17.9	Tralee	5.3	5.3	37.0	15.9	15.9
Galway	27.5	11.8	19.7	7.9	16.7	Waterford	26.6	26.6	9 5	19.0	20.4
Kilkenny	9.9	44.6	34.7	5.0	23.5	Wexford	36.4	31.9	9.1	31.9	27.3
Limerick	16.3	20.4	12.2	17.7	16.7						

The deaths (excluding those of persons admitted into public institutions from without the respective districts) from certain epidemic diseases registered in the 22 districts during the week ended Saturday, November 4, 1911, were equal to an annual rate of 1.8 per 1,000, the rates varying from 0.0 in sixteen of the districts to 5.7 in Waterford ; the 10 deaths from all causes for that district including one from diphtheria and 2 from diarrhœa. Included in the 112 deaths from all causes in Belfast are one from enteric fever, 2 from scarlet fever, and 2 from *enteritis* under 2 years of age. Among the 33 deaths from all causes in Cork are 2 from measles, and 3 from diarrhœa and *enteritis* under 2 years of age.

DUBLIN REGISTRATION AREA.

The Dublin Registration Area consists of the City of Dublin as extended by the Dublin Corporation Act, 1900, together with the Urban Districts of Rathmines, Pembroke, Blackrock, and Kingstown. The population of this area is 403,732, that of the City being 309,738, Rathmines 38,330, Pembroke 29,347, Blackrock 9,090, and Kingstown 17,227.

In the Dublin Registration Area the births registered during the week ended November 4 amounted to 193—95 boys and 98 girls—and the deaths to 169—75 males and 94 females.

DEATHS.

The registered deaths, omitting the deaths (numbering 11) of persons admitted into public institutions from localities outside the Area, represent an annual rate of mortality of 20.4 per 1,000 of the population. During the forty-four weeks ending with Saturday, November 4, the death-rate averaged 21.5, and was 0.8 below the mean rate for the corresponding portions of the 10 years 1901–1910.

The total deaths registered, numbering 169, represent an annual rate of 21.8 per 1,000. The annual rate for the past forty-four weeks was 22.7 per 1,000, and the average annual rate for the corresponding period of the past ten years was 23.3 per 1,000 of the mean population for all deaths registered.

The registered deaths include 3 from enteric fever, 4 from measles, 2 from scarlet fever, one from whooping-cough, 14 from diarrhœa and *enteritis* in children under 2 years, and one death from influenza. In the 3 preceding weeks, deaths from enteric fever were 4, 4, and one ; deaths from measles were one, 2, and 5 : deaths from scarlet fever were one, 4, and one ; deaths from

whooping-cough were one, one, and 5; and deaths from diarrhœa and *enteritis* under 2 years were 27, 13, and 13. Deaths from influenza were one, one, and 0.

Tuberculous disease caused 24 deaths, comprising 19 from pulmonary tuberculosis and one death from each of the following:—Tubercular meningitis, tubercular peritonitis, tuberculosis of the vertebral column, tuberculosis of the hip-joint, and disseminated tuberculosis. In the three preceding weeks, tuberculous diseases caused 22, 32, and 24 deaths respectively.

Broncho-pneumonia caused 4 deaths, and *pneumonia* (type not distinguished) 2 deaths.

There were 6 deaths from cancer.

The deaths of 2 infants were ascribed to *convulsions*, one death to a congenital defect, 3 deaths to prematurity, and 5 to congenital debility.

Sixteen deaths were caused by organic diseases of the heart, and bronchitis accounted for 25 deaths.

Of 2 accidental deaths one was by burning, and there was one infanticide.

In 6 instances the cause of death was "uncertified," there having been no medical attendant during the last illness. These cases include the death of one child under 2 years of age, and the deaths of 3 persons aged 65 years and upwards.

Forty-seven of the persons whose deaths were registered during the week ended November 4 were under 5 years of age, (33 being infants under one year, of whom 8 were under one month old), and 50 were aged 65 years and upwards, including 39 persons aged 70 and upwards. Among the latter were 22 aged 75 years and upwards, of whom one (a female) was stated to have been aged 93 years.

The Registrar-General points out that the names of the cause of death printed above in italics should be avoided whenever possible in Medical Certificates of the Cause of Death.

STATE OF INFECTIOUS DISEASE IN THE DUBLIN REGISTRATION AREA AND IN BELFAST.

The usual returns of the number of cases of infectious diseases notified under the "Infectious Diseases (Notification) Act, 1889," and the "Tuberculosis Prevention (Ireland) Act, 1908," as set forth in the following table, have been furnished by Sir Charles A. Cameron, C.B., M.D., Medical Superintendent Officer of Health

for the City of Dublin; by Mr. Fawcett, Executive Sanitary Officer for Rathmines and Rathgar Urban District; by Mr. Manly, Executive Sanitary Officer for Pembroke Urban District; by Mr. Heron, Executive Sanitary Officer for Blackrock Urban District; by the Executive Sanitary Officer for Kingstown Urban District; and by Dr. Bailie, Medical Superintendent Officer of Health for the City of Belfast.

TABLE SHOWING THE NUMBER OF CASES OF INFECTIOUS DISEASES notified in the Dublin Registration Area (viz.—the City of Dublin and the Urban Districts of Rathmines and Rathgar, Pembroke, Blackrock, and Kingstown), and in the City of Belfast, during the week ended November 4, 1911, and during each of the preceding three weeks. An asterisk (*) denotes that the disease in question is not notifiable in the District.

CITIES AND URBAN DISTRICTS	Week ending	Small-pox	Measles	Rubella, or Epidemic Rose Rash	Scarlet Fever	Typhus	Relapsing Fever	Diphtheria	Membranous Croup	Pyrexia (origin uncertain) [a]	Enteric or Typhoid Fever	Erysipelas	Varicella	Whooping-cough	Cerebro-spinal Fever	Tubercular Phthisis (*Phthisis*)	Total
City of Dublin	Oct. 14	-	*	*	35	4	-	6	-	1	18	8	*	*	-	14	86
	Oct. 21	-	*	*	39	5	-	10	1	3	28	6	*	*	-	19	101
	Oct. 28		*	*	26	1	-	9	-	5	12	16	*	*	-	16	85
	Nov. 4	-	*	*	30		-	8	-	4	12	13	*	*	-	14	81
Rathmines and Rathgar Urban District	Oct. 14	-	*	*	2	-	-	2	-	-	2	-	-	*	*	*	6
	Oct. 21	-	*	*	5	-	-	-	-	-	-	-	-	*	*	*	5
	Oct. 28	-	*	*	9	-	-	4	-	-	6	1	-	*	*	*	20
	Nov. 4	-	*	*	2	-	-	8	-	-	-	1	1	*	*	*	12
Pembroke Urban District	Oct. 14	-	1	-	2	-	-	-	-	-	-	-	-	2	-	-	5
	Oct. 21	-	-	-	5	-	-	-	-	-	3		-	-	-	-	8
	Oct. 28	-	2	-	6	-	-	1	-		1	-	-	-	-	-	10
	Nov. 4	-	2	-	-	-	-	1		-	1	1		-	-	-	5
Blackrock Urban District	Oct. 14	-	*	*	2	-	-		-	-		1	*	*	-	*	3
	Oct. 21	-	*	*		-	-	-	-	-			*	*	-	*	-
	Oct. 28	-	*	*	-	-	-	1	-	-	-	-	*	*	-	*	1
	Nov. 4	-	*	*	1	-	-	-	-	-			*	*	-	*	1
Kingstown Urban District	Oct. 14	-	*	*	1	-	-	-	-	-		1	*	*	*	-	2
	Oct. 21	-	*	*	-	-	-	-	-	-		1	*	*	*	1	2
	Oct. 28	-	*	*	1	-	-	-	-	-	1	1	*	*	*	1	4
	Nov. 4	-	*	*	-	-	-	-	-	-	1	2	*	*	*	-	3
City of Belfast	Oct. 14	-	*	*	34			5	1	-	6	10	*	*	-	7	63
	Oct. 21	-	*	*	44	4	-	7	-	2	3	8	*	*	-	7	75
	Oct. 28	-	*	*	30	-	-	6	-	1	6	7	*	*	-	7	58
	Nov. 4	-	*	*	35	-		7		1	5	9	*	*	-	14	70

[a] Continued Fever.

CASES OF INFECTIOUS DISEASES UNDER TREATMENT IN DUBLIN HOSPITALS.

During the week ended November 4, 1911, 18 cases of measles were admitted to hospital, 4 were discharged, there were 2 deaths, and 32 cases remained under treatment at the close of the week. In the 3 preceding weeks such cases had been 5, 13, and 20, respectively.

Twenty-four cases of scarlet fever were admitted to hospital, 25 were discharged, there were 2 deaths, and 177 cases remained under treatment at the close of the week, exclusive of 23 convalescents from the disease who were still under treatment at Beneavin, Glasnevin, the Convalescent Home of Cork Street Fever Hospital, Dublin. At the close of the 3 preceding weeks the cases in hospital had been 147, 153, and 180, respectively.

Three cases of typhus were discharged from hospital during the week, and 8 cases remained under treatment at its close.

Nineteen cases of diphtheria were admitted to hospital, 10 were discharged, and there was one death. The cases in hospital, which at the close of the 3 preceding weeks had numbered 43, 41, and 51 respectively, were 59 at the close of the week under discussion.

Fourteen cases of enteric fever were admitted to hospital, 20 were discharged, there were 3 deaths, and 124 cases remained under treatment in hospital at the close of the week, the respective numbers in hospital at the close of the 3 preceding weeks being 158, 141, and 133.

In addition to the above-named diseases, 4 cases of pneumonia were admitted to hospital, 6 were discharged, and 20 cases remained under treatment at the end of the week.

ENGLAND AND SCOTLAND.

The mortality in the week ended Saturday, November 4, in 77 large English towns (including London, in which the rate was 13.1), was equal to an average annual death-rate of 13.5 per 1,000 persons living. The average rate for 8 principal towns of Scotland was 16.4 per 1,000, the rate for Glasgow being 18.3, and that for Edinburgh 13.3.

INFECTIOUS DISEASE IN EDINBURGH.

The Registrar-General has been favoured by A. Maxwell Williamson, M.D., B.Sc., Medical Officer of Health for Edinburgh, with a copy of his Return of Infectious Diseases notified during the week ended November 4. From this Report it appears that of a total of 62 cases notified, 25 were of scarlet fever, 17 of phthisis, 15 of diphtheria, and 5 of erysipelas. Among the 358 cases of infectious diseases in hospital at the close of the week were 173 cases of scarlet fever, 60 of phthisis, 62 of diphtheria, 25 of whooping-cough, 5 of erysipelas, 4 of chicken-pox, 7 of enteric fever, and 12 of measles.

Meteorology.

Abstract of Observations made in the City of Dublin, Lat. 53° 20′ N., Long. 6° 15′ W., for the Month of October, 1911.

Mean Height of Barometer, - - -	29.886 inches.
Maximal Height of Barometer (10th, at 9 a.m.),	30.563 ,,
Minimal Height of Barometer(26th, at 11 30 a.m.),	28.870 ,,
Mean Dry-bulb Temperature, - - -	49.9°.
Mean Wet-bulb Temperature, - - -	48.2°.
Mean Dew-point Temperature, - - -	46.4°.
Mean Elastic Force (Tension) of Aqueous Vapour,	.320 inches.
Mean Humidity, - - - -	88.3 per cent.
Highest Temperature in Shade (on 18th), -	61.4°.
Lowest Temperature in Shade (on 29th), -	33.2°.
Lowest Temperature on Grass (Radiation) (29th),	30.0°.
Mean Amount of Cloud, - - -	66.7 per cent.
Rainfall (on 20 days), - - -	3.787 inches.
Greatest Daily Rainfall (on 20th), - -	.830 inch.
General Directions of Wind, - -	E.S.E., W.N.W.

Remarks.

The month opened with cold northerly winds and frequent showers. From the 6th to the 13th beautiful weather prevailed owing to the presence of an anticyclone, in which the barometer rose slightly above 30.6 inches over the north of Ireland and the south of Scotland on the 10th. During this period the nights were often cold, with frost inland, while the days were bright and warm. Between the 13th and 15th a large but shallow depression lay off the S. of Ireland and over the Bay of Biscay. This system caused SE. winds and dull, rainy weather. But St. Luke's Day, the 18th, was very fine, warm and bright. From that date to the close very unsettled weather was experienced. Rain fell almost daily—often in large quantities—and strong winds or gales were felt as deep depressions approached from the Atlantic in quick succession, their secondary systems passing directly over the British Islands.

In Dublin the arithmetical mean temperature (50.8°) was above the average (49.5°); the mean dry-bulb readings at 9 a.m. and 9 p.m. were 49.9°. In the forty-seven years ending with 1911, October was coldest in 1892 (M. T. = 44.8°) and in 1896 (M. T. =

(45.0°). It was warmest in 1908 (M. T. = 55.4°) and in 1876 (M. T. = 53.1°). In 1910, the M. T. was 51.7°.

The mean height of the barometer was 29.886 inches, or 0.046 inch above the corrected average value for October—namely, 29.840 inches. The mercury rose to 30.563 inches at 9 a.m. of the 10th, and fell to 28.870 inches at 11 30 a.m. of the 26th. The observed range of atmospheric pressure was, therefore, 1.693 inches.

The mean temperature deduced from daily readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 49.9°, or 5.4° below the value for September, 1911. The arithmetical mean of the maximal and minimal readings was 50.8°, compared with a thirty-five years' (1871–1905) average of 49.5°. Using the formula, *Mean Temp.* = *Min.* + (*Max.* — *Min*) × .485, the mean temperature was 50.6°, or 1.3° above the average mean temperature for October, calculated in the same way, in thirty-five years, 1871–1905, inclusive (49.3°). On the 18th the thermometer in the screen rose to 61.4—wind, S.E.; on the 29th the temperature fell to 33.2°—wind, calm. The minimum on the grass was 30.0° also on the 29th.

The rainfall was 3.787 inches, distributed over 20 days. The rainfall was considerably above, while the rainy days were also above, the average. The average rainfall for October in the thirty-five years, 1871–1905, inclusive, was 2.870 inches, and the average number of rainy days was 18. In 1880 the rainfall in October was very large—7.358 inches on 15 days. In 1875, also, 7.049 inches fell on 26 days. On the other hand, in 1904 only .454 inch fell on 11 days, in 1890 only .639 inch fell on but 11 days; in 1884, only .834 inch on but 14 days; and in 1868 only .856 inch on 15 days.

High winds were noted on 7 days, and attained the force of a gale on 2 days—the 21st and 30th. The atmosphere was foggy in Dublin on the 7th, 10th, 11th, 12th, 13th, 14th, 27th, and 28th. There was a solar halo on the 2nd and again on the 11th. Thunder and lightning occurred on the 5th. Lightning was seen on the 26th. Hail fell on the 3rd, 27th and 30th.

The rainfall in Dublin during the ten months ending October 31st, 1911, amounted to 16.386 inches on 140 days, compared with 27.330 inches on 177 days in 1910, 21.106 inches on 158 days in 1909, 12.366 inches on 123 days during the same period in 1887 (the dry year), and a thirty-five years' (1871–1905) average of 23.030 inches on 164 days.

Mr. C. D. Clark reports that at the Normal Climatological Station in Trinity College, Dublin, the mean height of the barometer was 29.898 inches, the range of atmospheric pressure being from 30.550 inches at 9 a.m. of the 10th to 28.891 inches at 9 a.m. of the 22nd. The mean value of the readings of the dry-bulb thermometer at 9 a.m. and 9 p.m. was 50.7°. The arithmetical mean of the daily maximal and minimal temperatures was 50.8°. The screened thermometers rose to 63.9° on the 18th and fell to 30.7° on the 29th. On this latter date the grass minimum was 19.7°. Rain fell on 18 days to the amount of 3.625 inches, the greatest fall in 24 hours being .775 inches on the 20th. The duration of bright sunshine, according to the Campbell-Stokes recorder, was 79.7 hours, of which 7.0 hours occurred on the 8th and again on the 10th. The mean daily sunshine was 2.6 hours. The mean temperature of the soil at 9 a.m. at a depth of one foot was 52.1° ; at a depth of 4 feet it was 54.2°.

Dr. Christopher Joynt, F.R.C.P.I., registered 3.945 inches of rain on 20 days at 21 Leeson Park, Dublin, the largest measurement in 24 hours being .870 inch on the 26th. On the 20th .860 inch was recorded. The ten months' rainfall at this station is 17.154 inches on 135 days.

Mr. T. Bateman reports that the rainfall at The Green, Malahide, Co. Dublin, was 3.085 inches on 16 days, the greatest fall in 24 hours being .615 inch on the 26th. The mean shade temperature was 47.9°, the extremes being—highest, 60.0° on the 18th ; lowest, 27.5° on the 28th.

Dr. Henry Cullinan furnishes the following Abstract of Observations made at Portrane House, Donabate, Co. Dublin, Lat. 53° 29′ N., Long. 6° 7′ W., in the month of October, 1911 :—

Rainfall (on 15 days), - - - -	3.04 inches.
Greatest Daily Rainfall (on 26th), - -	.83 inch
Highest Temperature in Shade (on 18th and 20th),	60.2°.
Lowest Temperature in Shade (on 29th) - -	32.0°.
Mean Maximum Temperature for month - -	55.7°.
Mean Minimum Temperature for month - -	45.3°
Arithmetical Mean Temperature - - -	50.5°.

Captain Edward Taylor, D.L., returns the rainfall at Ardgillan, Balbriggan, Co. Dublin (height above sea level, 210 feet), as 3.75 inches on 17 days, the largest measurement in one day being .96 inch on the 26th. The rainfall was 1.15 inches above the

average and the rain-days were equal to the average. From January 1 to October 31, the rainfall at Ardgillan has been 20.07 inches on 136 days, or 3.31 inches and 19 days below the respective averages. The highest shade temperature in October was 60.8° on the 18th, the lowest was 31.9° on the 29th.

Dr. Arthur S. Goff reports that at Lynton, Dundrum, Co. Dublin, rain fell on 22 days to the amount of 5.02 inches, compared with 3.45 inches on 24 days in 1902, 3.38 inches on 26 days in 1903, .42 inch on 9 days in 1904, 1.54 inches on 15 days in 1905, 4.52 inches on 24 days in 1906, 5.40 inches on 30 days in 1907, 1.77 inches on 15 days in 1908, 3.02 inches on 25 days in 1909, and 2.27 inches on 19 days in 1910. The greatest measurement in 24 hours was 1.23 inches on the 20th. The mean temperature in the shade was 50.3°, the range being from 61° on the 20th to 33° on the 29th. The mean temperature of October was 50.9° in 1902, 50.8° in 1903, 51.6° in 1904, 47.1° in 1905, 50.7° in 1906, 49.9° in 1907, 55.0° in 1908, 51.6° in 1909, and 51.4° in 1910.

At Manor Mill Lodge, Dundrum, Co. Dublin, Mr. George B. Edmondson measured 4.74 inches of rain on 20 days, the maximum in 24 hours being 1.17 inches on the 20th. The mean temperature of the month was 49.9°, the thermometer rising to 63° on the 20th and falling to 33° on the 29th.

Mrs. Olive F. Symes returns a rainfall of 5.45 inches on 17 days at Druid Lodge, Killiney, Co. Dublin. The heaviest fall in 24 hours was 1.24 inches on the 26th. The average October rainfall at Cloneevin, Killiney, in the 24 years, 1885–1908, was 2.985 inches on 17.2 days.

The rainfall recorded at Cheeverstown Convalescent Home, Clondalkin, Co. Dublin, by Miss Eleanor M. Moore, was 3.85 inches on 20 days. The heaviest rainfall in 24 hours was .89 inch on the 26th. Hail fell on the 22nd and 26th.

Dr. W. S. Ross recorded 4.925 inches of rain on 18 days at Clonsilla, Greystones, Co. Wicklow, the greatest rainfall in 24 hours being 1.13 inches on the 20th. The mean temperature for October was 50.0°. The shade thermometer rose to 63° on the 21st, and fell to 31° on the 29th.

At Coolagad, Greystones, Co. Wicklow, Dr. John H. Armstrong, M.B., measured 5.74 inches of rain on 22 days, the maximal fall in 24 hours being 1.52 inches on the 20th. From January 1 to October 31, 1911, the rainfall at Coolagad amounted to 19.08 inches on 128 days.

Dr. Charles D. Hanan reports that 5.63 inches of rain fell on 20 days at the Royal National Hospital for Consumption for Ireland, near Newcastle, Co. Wicklow. The maximum in 24 hours was 1.30 inch on the 29th. The mean temperature of the month at the Hospital was 48.9°, the extreme readings of the shade thermometer being—highest, 62.0° on the 18th; lowest, 31.5° on the 26th.

Mr. W. Miller states that in the City of Cork there were 17 days with rain during the month, or one day less than the average—total fall, 4.50 inches, which was 1.20 inches over the average. No rain fell in Cork on the first 12 days of the month. The greatest day's rain was that of the 20th—.95 inch. The rainfall of the past ten months was 25.20 inches on 133 days, which was 4.20 inches under the average for the same period. The rain-days were 21 in defect.

The Rev. Arthur Wilson, M.A., recorded a rainfall of 6.45 inches on 19 days at the Rectory, Dunmanway, Co. Cork. The heaviest falls in 24 hours were 1.60 inch on the 28th, .88 inch on the 20th, .81 inch on the 14th, and .72 inch on the 21st. The first 12 days were fine, no rain falling from the 2nd to the 11th, inclusive. After the 13th the weather was very unsettled, with heavy rains, chiefly at night. The total rainfall for the completed 10 months of 1911 is 44.09 inches, compared with an average for 6 years of 42.63 inches. Distant thunder occurred on the night of the 26th. The average rainfall of October for the 6 years is 5.73 inches.

Mr. William Holbrow reports a rainfall of 6.94 inches on 19 days at Derreen, Kenmare, Co. Kerry, the heaviest fall in 24 hours being 1.94 inches on the 29th, all of which fell in 9 hours, causing great floods. The weather was very fine at Derreen from the 1st to the 17th. From the 19th to the 31st there was a stormy period. Thunder on the 26th.

At the Ordnance Survey Office, Phœnix Park, Dublin, the October rainfall was 3.553 inches on 18 days. The heaviest fall in 24 hours was .820 inch on the 26th. The total amount of bright sunshine was 83.1 hours, the daily maximal duration being 7.2 hours on the 8th.

At the Royal Botanic Gardens, Glasnevin, rain fell on 19 days to the amount of 4.10 inches, the greatest daily fall being .83 inch on the 26th.

PERISCOPE.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

At a meeting of the College, held on October 18, 1911, the following gentlemen, having passed the requisite examinations, were elected Fellows :—Ernest William Charles Bradfield, M.B., Ch.B., Capt. I.M.S. ; Henry Pattullo Cook, M.B., Ch.B., Captain, I.M.S., Edinburgh ; Frederick Augustus Fulmore Corbett, M.D., C.M., Nova Scotia ; Charles Firmin Cuthbert, M.R.C.S. Eng., L.S.A. Lond., Gloucester ; Leonard Joseph Montagu Deas, M.B., Ch.B., Captain, I.M.S., Edinburgh ; John Evan Dewar, M.D., C.M., L.R.C.P.Lond., M.R.C.S.Eng., Minnesota, U.S.A. ; Archibald Nicol Fleming, M.B., C.M., Major, I.M.S., London ; Robert Macnaught Glover, M.B., Ch.B., Edinburgh ; Satis Chandra Sen Gupta, M.B., Ch.B., Edinburgh ; Stanley Martin Livesey, M.B., Ch.B., Straits Settlements ; Herbert Gladstone Murray, M.D., C.M., Ontario, Canada ; Ralph Edmund Powell, M.D., C.M., St. John, N.B., Canada ; Satyendra Nath Ray, M.B., Calcutta, India ; Carl Henry Reinhold, M.R.C.S. Eng., L.R.C.P.Lond., Captain, I.M.S., London ; Charles Merill Schaffter, M.B., Ch.B., Ispahan, Persia ; John Strathearn, M.D., M.B., Ch.B., Glasgow ; Raymond Verel, M.B., Ch.B., St. Cyrus, N.B. ; and James Ingram Pirie Wilson, M.D., M.B., Ch.B., London, N.W.

THE DUBLIN HOSPITALS' TUBERCULOSIS COMMITTEE.

A meeting of the Dublin Hospitals' Tuberculosis Committee was held in the P. F. Collier Memorial Dispensary for the Prevention of Tuberculosis, Charles Street, Upper Ormond Quay, on Friday, October 27, 1911. There were present :—Sir John Moore in the Chair ; Her Excellency the Countess of Aberdeen, the Right Hon. Dr. Michael F. Cox, Sir Charles Cameron, C.B., M.D. ; Mr. James Talbot Power, D.L. ; Dr. T. J. Browne, Professor E. J. McWeeney, Dr. Daniel, Dr. Kirkpatrick, Dr. Lombard Murphy, Dr. Delahoyde, Dr. J. T. Crowe, Medical Superintendent ; and the Hon. Secretary, Sir William Thompson. Mr. James Inglis, J.P., and Dr. J. Lumsden wrote regretting their inability to be present. The minutes of the previous meeting were read, confirmed and signed. The Hon. Secretary presented the appended Summary of the Report of the three Nurses working

in Dublin and Districts amongst the consumptive poor. This was carefully considered and deemed to be most satisfactory. A letter was read from the Queen Victoria Jubilee Institute for Nurses, in reference to the Preventorium, Sutton, where the Inspectors found the patients and Institution in a most satisfactory condition. After this a meeting of the Advisory Committee of the P. F. Collier Memorial Dispensary for the Prevention of Tuberculosis was held, the same Members being present. The preliminary arrangements for the opening of the Dispensary were made, and it was decided that it should be opened on Wednesday, the 1st of November, 1911. The Committee, wishing to meet the convenience of those who find it difficult to leave their work during the day, approved the arrangement whereby patients would be attended to on two evenings each week—Mondays and Thursdays—at 7 p.m., and on other days at 10 a.m.

Summary of report of work done by three tuberculosis district nurses in Dublin during eight months ended October 14, 1911 :—

No. of cases attended—148 old cases, 160 new cases	308
Of these, 52 died ; the remainder are under treatment or have been dealt with as follows :—	
,, visits paid	3,880
,, average weekly attendances	112
,, cases notified from hospital	64
,, ,, otherwise	99
,, ,, improved so much that they were able to return to work again	28
,, ,, sent to the Royal National Hospital, Newcastle, Co. Wicklow	6
,, ,, waiting to be admitted to Newcastle Hospital	3
,, ,, sent to other sanatoriums	49
,, ,, gone or sent to friends in the country	15
,, ,, sent to South Dublin Union for special tuberculosis treatment	20
,, ,, admitted to North Dublin Union Hospital	5
,, ,, admitted to South Dublin Union Hospital	—
,, ,, admitted to the Hospices for the Dying	38
,, ,, attended who have been at Newcastle Hospital	26
,, deaths at patients' homes	24
,, ,, in institutions	28
,, families removed to more healthy homes	14
,, rooms disinfected	111

No. of insanitary houses reported	8
,, sputum flasks distributed	30
,, families received nourishment	160
,, patients who received clothes, shoes, bedding, &c.	90
,, families for whom rent is being paid while the bread-winner is at Newcastle or in the Dublin Unions	10
,, children of parents suffering from tuberculosis sent to the country through Fresh Air Fund	74
,, children boarded out while the mother is in hospital	—
,, patients or their families for whom work has been obtained	17
,, children sent to schools or institutions after parents' death	8
,, each family, rough average	6
,, families occupying one room	78
,, families in which more than one person are affected	46
Average weekly income	13s. 8d.
Average weekly income when breadwinner is ill	5s.

DUODENAL ULCER.

MM. A. Mathieu and Æltinger (*La Quinzaine Thérapeutique*, July 10, 1911), point out that the ulcer described by English and American surgeons as duodenal ulcer is better described as an ulcer of the pylorus or as a duodenopyloric ulcer; the symptoms are those of pyloric ulcer—pyloric spasm and hypersecretion. The clinical study of four cases of true duodenal ulcer, that is to say, an ulcer situated at a distance of one, two, or three centimetres from the pylorus, recognised and diagnosticated by M. Æltinger, gave him an opportunity of learning their symptamotology. Except in absolutely latent ulcers or in perforating ones hæmorrhage is not present. The pains are intermittent, sometimes continuing for days or weeks with intervals of freedom from suffering; they come on slowly some five or six hours after food, and usually at night. They occur in the epigastrium, and are better marked on the right side, in the supra-pubic region, which is painful on palpation, and they radiate along the right side from the iliac region to the diaphragm. Vomiting is seldom present, but when it does occur it consists of a little gastric juice. Intestinal hæmorrhage is not constant—it occurred in but one of the four cases; it occurs less frequently than in ulcer of the stomach, probably

because duodenal ulcers are directly in the path of the undigested food; they are less in contact with the alimentary substances. Exploration of the stomach showed neither hypersecretion nor arrest of the digestive process, but an excess of hydrochloric acid. A skiagraph showed the undistended stomach, the relative rarity of peristaltic contractions and the pylorus to be situated at the right side of the third lumbar vertebra. The fourth case was one on which MM. Ricard and Labey had performed a gastro-enterotomy, after which all the symptoms disappeared, and the patient remains well. M. A. Mathieu's case was that of a true ulcer of the duodenum. The patient, a man of thirty-one years of age, who had suffered much from severe dyspepsia for three years, came complaining of a sharp persistent pain of two months' duration, situated under the liver, with paroxysmal attacks of great intensity three or four hours after mid-day. A gastro-enterotomy was performed by M. Labey, when a simple clinical examination and a radioscopic one were made and a duodenal ulcer was found situated at the beginning of the middle third of the duodenum. In this case M. Mathieu draws attention to the clearly marked symptoms: the pain gradually relieved by the ingestion of food; their intensity in and their radiation from the right during the paroxysm of pain; the localisation of the pain and its provocation by palpation a little below the gastric region; the presence of slight malaria; the absence of vomiting, of dilatation of the stomach, of visible peristaltic movements, constant as found by direct and by radioscopic examination, finally by means of the radioscopic screen the ulcer was clearly localised at the painful point—the union of the upper and middle part of the duodenum—where it was demonstrated by direct examination after incision of the ventral wall.

MASSAGE OF THE HEART IN CHLOROFORM COLLAPSE.

In *La Presse Médicale* for October 18, 1911, is a paper by M. Pierre Wiart on this subject. In this he considers the histories of the eighteen cases collected by Mocquot in 1909, and adds those of fifteen others which have been published since. Among the first series there were eight successes and in the second six. It would appear that in all cases in which it has been tried the transdiaphragmatic route has been followed by a fatal result; all the successful cases have followed the subdiaphragmatic route.

From a study of these reported cases it is evident that the most important point in the prognosis is the length of time that is allowed to elapse between the onset of the symptoms of collapse and the commencement of massage. In practically all the successful cases the arrest of the circulation lasted less than ten minutes, and only exceptionally as long as fifteen minutes. In many cases where a longer period was allowed to elapse before massage was begun, there was a partial success, the heart regaining its power of contraction and the respiration and circulation continuing unaided for several hours, but without a return to consciousness, from which it would appear that the higher nerve cells had been killed by the prolonged arrest of the circulation. Fourteen successes out of thirty-three is certainly entirely too large, and is explained by the fact that the successful cases are more likely to be reported than the unsuccessful. With regard to rules for the adoption of this treatment, if the abdomen is already opened, subdiaphragmatic massage should be begun if the patient does not show signs of response to the ordinary methods of resuscitation within a couple of minutes; artificial respiration should be practised at the same time. If the abdomen is not open, not more than five minutes at the most should be wasted on other methods before performing a rapid laparotomy and starting subdiaphragmatic massage.

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